

This volume contains remarks upon  
~~the~~ Products, - Extracts &c. -



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Nov. - Forty First Lecture Feb. 22. 1834

Scammonium. The product of the Convolvulus  
Scammonium. This has a perenniae, long, tapering  
root, with numerous twining stems, - leaves alter-  
nate, on long footstalks, sagittate, pointed & trian-  
gular. - Flowers stand on long peduncles at the ax-  
ils of the leaves, in pairs. - Corolla is bell shape &c. -  
Belongs to the Class Centurionia, Order Monocotyledonae.  
It is a native of Syria, near Aleppo. - Scammonium is  
obtained by cutting off obliquely the stems & upper  
part of the root, so that the juice may run down,  
then it is received in proper vessels & hardened in the  
sun; - but more commonly before concreting, it is  
mixed with impurities. - It comes to us in stems  
of about 6 in. in diameter, & 5 in. high, - irregular pie-  
ces, <sup>or circular cutters</sup> dark gray externally, lighter when fresh broken,  
& fracture has a waxy gloss, not very porous, nor  
very compact <sup>is pale & minutely veined</sup> - This constitutes the Aleppo Scam.

Another variety is called Myrrina Scam. - Its  
origin is not exactly known, & it is not brought into  
this country. - It is in flat cakes, about 1 in. thick, - dark-  
-er

*Cynanchum phlogothecum*

Scammony was known to the <sup>by</sup> Romans & Greeks, - & Boer-  
haave thought it very valuable, - (Chapman)

er, more compact, - harder & more brittle than <sup>shining fracture</sup> Aleppo.

Aleppo gives a light grey powder, with water, forms a green milky appearance, - has a bitter taste.

Myrra forms a dirty white emulsion, - but that in our market under this name is a fictitious article.

The Montpelier Scammony is obtained from a plant growing in the S. of France; - it resembles the Myrra more than Aleppo, - of a dark colour, - mucous feel, - but is not seen in our market. -

It is considered a Gum Resin, its chief constituents being resin & Gum, hence it is dissolved partly by Water, partly by Alcohol, & wholly by Eth. Alcohol. With Water it forms an opaque, greenish, imperfect solution. Emulsion of Gum - Balsam

It is a drastic cathartic, operating with severity & pain, & there is danger of its producing inflammation. It is never prescribed alone, unless in the torpor of the bowels which may occur in nervous diseases. - Enters into the composition of the Ext. Colocynth. Comp. - Dose of it from 5 to 10 grs. - Conject. Scammon. - dose ʒss to ʒi -



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*Bambosia*. - It is uncertain from what plant this is derived; some have considered it the product of the *Stalagmites Bambosoides*; while others refer it to the *Farinaria Bambosia*. These are said to grow in Ceylon. - It comes from Siam & Cochinchina.

It is procured by breaking off the leaves and shoots from which the juice issues in drops; then it is collected, hardened & rolled, or permitted to con-  
 crete in the hollow of the Bamboo. From Siam, it is taken to Canton & Calcutta, whence we receive it in different packages. - It is usually in cylindrical rolls, 1 or 2 in. in diameter, often curved, creased, or sometimes in masses; - Striated externally of a dirty colour from the cane. - It is of a reddish orange colour, sometimes covered with a yellow powder. - brittle, - inodorous, - little taste, insignificant. It is a Gum Resin, - <sup>2</sup> later predominates. -  
 With Water, it forms an opaque yellow solution, with Alc., a clear, golden yellow, which becomes turbid by adding Water. - Dissolved by <sup>Alc. S. & S.</sup> Alc. &c. It is precipitated from an alkaline solution by

In large doses it renders - the secretory function of the  
For large doses it renders -

It has lately acquired some celebrity in Dysentery, where  
it is supposed to prove beneficial by causing the ef-  
fuent to pour out serum. -

Chloride of Potassium, when properly obtained  
is most efficient, it is the simplest form of the principle -



acids, - & from strong acids, by Water. -

It is a powerful, drastic Cathartic, producing copious watery discharges, & acting upon the upper part of the bowels. - It is not often given alone, but frequently in combination - Dose from ʒ to ʒss. - Best plan is to give it in small doses of ʒi every 1/2 hour or hour till it operates. -

Generally given in Pice or <sup>in Solution</sup> Alkaline Solution.  
Elaeagnus. Product of the Monarda Elaeagnus called the wild or squirting cucumber. It is a perennial plant, sending up several stems like the common cucumber, - full of hairs, without tendrils. leaves triangular & cordate, on long footstalks. Flowers small & yellow. Belongs to class Monoclinia Order Monadelphica. Fruit is like common cucumber, & when ripe, falls & throws out its juice & seeds thro' the place by which it was attached to the footstalk. - The proper Elaeagnus is a pulverulent substance deposited from the juice. -

It is native of the South of Europe, & is cultivated in England, where it is more used. - As found

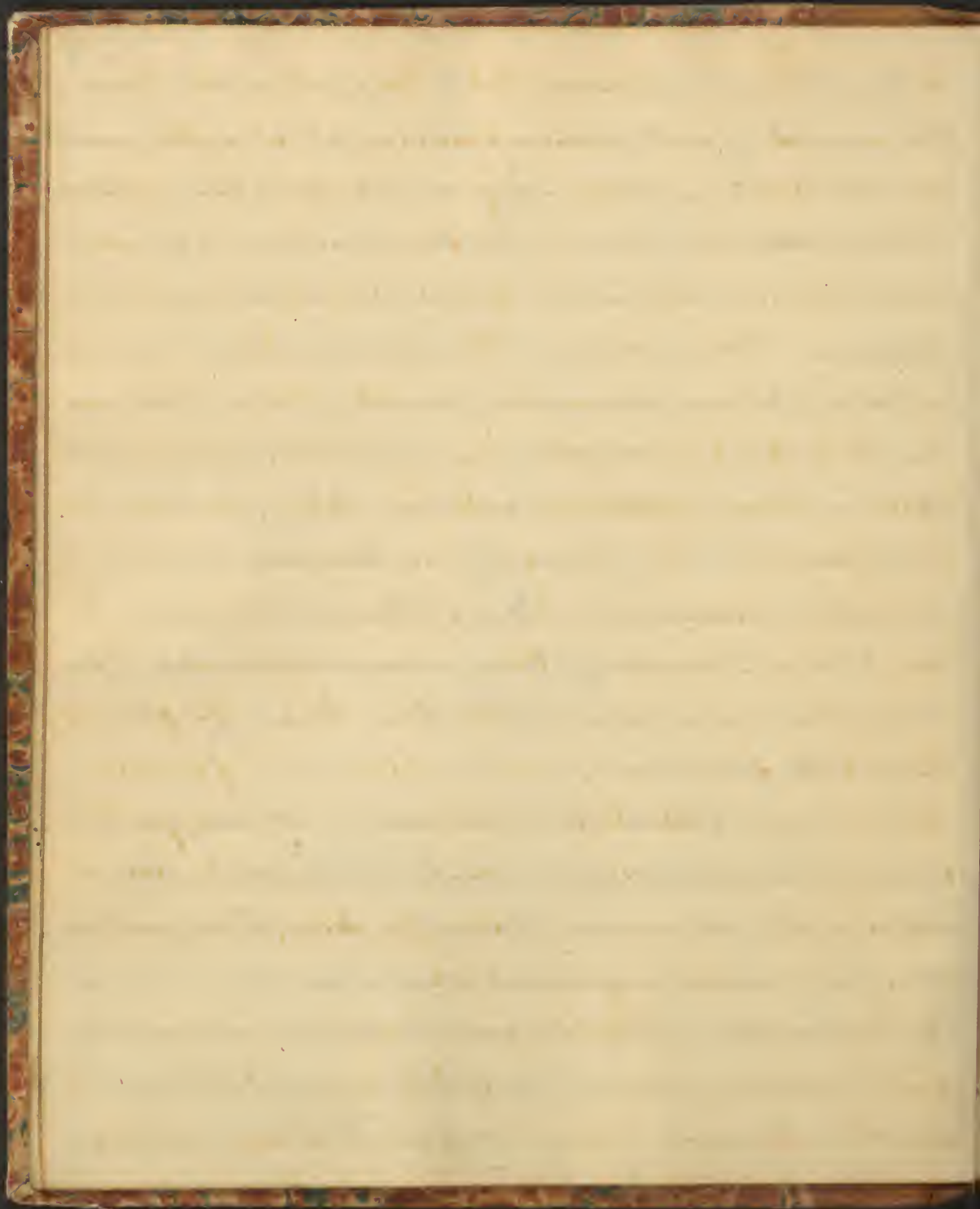
Plattine is also present, than first trial -

Done by Charles Smith's 10. 2. 1890

in the shops, it appears in thin, flat cakes, - of a light greyish green colour on the outer surface, with marks of the muslin upon which it has been dried, - bitter, - acid taste, - light, pulverulent, - inflammable. Oleum, obtained by Paris is not the active principle. Clateris, - obtained by <sup>of Edwards & Son</sup> ~~Storrs & Hannell~~ is more probably the purgative principle; - it is white, crystallisable, - bitter, - insoluble in Water & Alkali - sol-  
uble in Alcohol, Ether & hot Olive Oil, - <sup>at 360°</sup> fusible, - de-  
composed by <sup>higher</sup> heat & giving off an Ammoniacal odour, - it is neutral. - It is obtained by forming an Alcoholic Tinct. - filtering, - evaporating & precip-  
itating white wine, <sup>from it in 70°</sup> with Water. - To purify this, repeat the process.

It is very seldom used, on account of its dangerous effects. It is a powerful, <sup>irritant</sup> crastine cathartic, apt to inflame the stomach & bowels, & sometimes producing vomiting. - It is an ancient medicine & was used by the Greeks. - It is at present sometimes employed in combination in dropsical affections. -  
Dose,  $\frac{1}{2}$  to 2 gr. - Give  $\frac{1}{2}$  gr. & repeat <sup>every half hour to hour</sup> till it operates. -  
of Clateris 10 to 16 gr -





Oleum Ricini. Castor Oil. Product of the Ricinus  
communis. - In its native country, it is a perennial  
 plant, - sometimes attaining a considerable size.

It is cultivated in the U. States, where it is an  
 annual plant, but in E. Indies, S. of Africa &c, it is  
 perennial & like a tree. - The annual plant sends  
 up stems, which are round, smooth, glossy & hollow,  
 from 4 to 6 or 8 feet high; <sup>glaucous col.</sup> bearing leaves, peltate, pal-  
 mate, on long petioles; with 7 or 8 lobes, - serrate, ob-  
 long & pointed. The flowers are in racemes on the top  
 of the stem, & succeeded by a spike of capsules. Be-  
 long to Class Monoclin, Order Monadelphica. - The  
 male flowers are lower on the stem than the female.  
 Calyx has 5 divisions; - no corolla. - The female  
 flowers are at the top of the stem, each calyx has  
 3 divisions; no corolla. - Fruit is a capsule, roundish  
 with 3 sides, - covered with stiff prickles, - 3 celled, &  
 each cell containing one seed.

It is a native of the tropical region of Africa &  
 Asia, - cultivated largely in E. & W. Indies, & also in Eu-  
 rope & N. America. - Especially in N. Jersey, N. W.





Carolina & on the <sup>N.</sup> banks of the Ohio. - The flowers appear in July, & the seeds ripen in August & Sept. tender. The oil from the seeds is the part used. -

Forty-second Lecture Feb. 25. 1834

The seeds of the Ricinus Com. are in 3celled capsules, - each about the size of a grain of coffee, oval, compressed, with a taper at one end, from which runs a long ridge to the other end. - Its shape resembles that of a lick, whence its name. Colour externally is ash with reddish brown brins, within this layer it is black, & internally is a kernel, soft, fleshy, whitish & abounding in oil. Taste at first sweetish, afterwards acrid. They contain about 46 pr. ct. of oil, together with gum, albumen, starch &c. Taken internally, they act as a powerful irritant to the stomach & bowels. - 3 or 4 as a dose, both to irritate & purge. - This acrimony depends upon an active principle of a volatile nature, which they contain.

The oil is obtained from the seeds in various ways, but generally by expression. - They should be first

When that comes, it is less likely to be seen.

By the more appearing, I mean the more

The less often it is seen, the more precious it is.

moderately heated, so as they will <sup>not</sup> burn when  
touch'd; - then put in a screw press, & by pressure,  
the oil flows out, carrying with it also the acrimo-  
ny of the seeds. - The oil thus obtained, must be  
purified & rendered milder before it is fit for use.

To do this put it in iron boiler; - add Water &  
apply heat sufficient to boil. - The water dissolves  
the gum & starch; & the Albumen coagulates by  
the heat. - After decanting the oil carefully; - re-  
turn it to another boiler, mix again with Water,  
boil till it ceases, & the Water has evaporated;  
then the process must be stopped; - or the oil  
will assume a reddish colour & become acrid. -

Another process is to bruise the seeds, & boil them  
in Water, but this not so eligible or convenient.

Another also, by hot expression; - but by this the  
oil is apt to be more acrid & pingatic. -

It is sometimes adulterated, but very seldom. -  
It can be tested by its solubility; - if wholly soluble  
in Pure Alcohol, it is pure. - When pure, Castor oil  
is thick, viscid, colourless, with little odour; - it is





mild taste, followed by slight acrimony. —

When of a reddish colour, it has an unpleasant Sweet & a nauseous & acid taste; showing that it has been injured in its preparation. —

If it be full of a whitish, insoluble substance, it has been improperly Clarified. —

If too acid, — its acrimony can be driven off by a water-bath. — It is injured by exposure to air & light. —

It is not readily congealed, heavier than most of the fixed oils, & soluble in pure Alcohol. —

It is a gentle & certain Cathartic, operating without much uneasiness, & speedily, though sometimes it has been known to remain on the stomach to be discharged from the mouth in 24 hrs. afterwards.

It is given simply to evacuate the bowels, in irritation of the living membrane, — in dysentery, — diarrhoea, — cholera, — constipation in convalescence from acute diseases, — pregnant or puerperal women, but in very obstinate constipation, it does not act so efficiently as some of the more active Cathartics. — It is peculiarly adapted to infantile complaints,

The oleaginous mixture with the addition of a little  
Laudanum, is an excellent remedy for Diarr. - Dysentery &c. -

There being no danger in its administration

Dose for an adult  $\mathfrak{z}\text{i}$ . - for a child, teaspoonfuls.

The manner of administering it should be attended to, because it is generally difficult for a patient to swallow & retain it. -

A common method is to moisten the sides of a wine glass with Mint Water to prevent its sticking, & put a little also on top.

It is improper to give it in Stimulants. -

A good way is to stir it up in a cup of good Hot Coffee, or Hot Milk. -

It is sometimes given in the form of emulsion, as in the Pleurisy mixture, consisting of

*℞. Ricini*  $\mathfrak{z}\text{i}$

*Gum Arab.*

$\mathfrak{z}\text{ij}$  in form of mucilage, & rubbed together with the Yolk of one Egg &  $\mathfrak{z}\text{i}$  of Sugar, - then add gradually  $\mathfrak{f}\mathfrak{z}\text{ij}$  *℞. Menth.*

Stirring constantly, to make a good mixture. -

*℞.um Siglii*. Croton Oil. Product of the Croton Siglium; a small tree, bearing alternate, petiolate leaves. Flowers are in terminal racemes; Fruit a 3 celled





capsule, each cell containing a seed. - It is a native of E. Indies, - Bengal, Hindoostan &c. - The seeds were formerly known under the name of *Grana Tiglii*, but they passed out of the use, until attention was again called to them, for the oil which they afford.

They are oblong, - somewhat compressed, - obtuse; with longitudinal ridges & as to form 4 irregular surfaces. - of a brownish red colour externally, - but in the market their ext. coating is apt to be rubbed off & they present a black shell, beneath which is a brown oleiferous kernel. - The oil is obtained by expression, after first roasting the seeds. -

The oil is usually of an orange red colour, - with a faint odour, - hot, acrid & permanent taste, soluble in Sulphuric Ether, & ol. Turpentine, & partially in Alcohol. - It consists of 2 portions, - one, soluble in Alc. - Ether, - fixed & vol. oils, - while the other is a mild oil, destitute of Cathartic properties, & only slightly soluble in Alcohol. - Croton Oil is distinguished from other fixed oils, by being about half soluble in Alc. - while others are not. -

I first used this oil in America; - in the case of a young lady, labouring under *Hysteria* & General Dropsy. - Dr Burroughs brought me a vial of it from India; - of which I gave her one drop in the morning. - This produced profuse watery discharges; - & at night, - "she was as lean as a Grey-hound." - (Chapman)

\* It should at first be mixed with about 4 times as much Olive Oil; - then increase the strength if no pustules are produced. - Apply it at intervals of 6 or 8 hours for 2 or 3 days. -

It is the most active purgative known. - In moderate doses, it operates easily & certainly, - in large doses, it occasions vomiting, pain &c. sometimes terminating fatally. - It is very speedy in its operation, hence it is excellent in constipation, - in cases of children, since it operates in so small doses, that it may be given to them in their food, about from  $\frac{1}{16}$  to  $\frac{1}{12}$  of a drop. - Externally applied,\* it is apt to produce a pustular eruption. -

Dose for an adult, 10 or 2 drops, - better given in doses of  $\frac{1}{2}$  drop every hour till it operates. - It is best given in pills of crumbs of bread. - It may be also given in Emulsion & Tincture. -

Oleum Euphorbicum. - obtained by expression from the seeds of the Euphorbia Lathyris or Mole-plant; - which grows wild & is cultivated in this country. -

It is not officinal; - is obtained like Castor Oil, - is of a reddish-brown colour, - more fluid than Castor Oil, - & soon becomes rancid & acrid. -

Purgative dose from 5 to 10 drops; - but it is rather uncertain in its operation & apt to vomit. -



Recent Copalite contains about 40 pr. ct of Oil. - The old  
contains a smaller proportion. -



Copaiba. Product of different plants of the Genus *Copaifera*. - They are trees of considerable size, <sup>growing in S. America & W. Indies.</sup> with pinnate leaves; flowers in compound spikes, fruit oval, one-seeded capsules. - Belongs to Class Decandria, Order, Monogynia. - The juice is obtained by incisions; it then flows out, clear, thin, colourless, transparent, & thickens by exposure to air. - Our supply comes from Para in Brazil on the Amazon. - It is at first pale, - but when kept, it becomes darker, thicker, & even solid if spread out; - has a peculiar odour, - bitter, hot & nauseous taste, - is insoluble in Water, - soluble in Alc. - Ether, <sup>in 10. solutions</sup> Vol. & fixed oils. With Alkalies, it forms saponaceous compounds. -

It consists of a resin and a volatile oil, - also some acid, & may be ranked among the Turpentine. It is not properly a Balsam, because it contains no Benzoic Acid. - The vol. oil is in the proportion of about  $\frac{1}{3}$  or  $\frac{1}{2}$  its weight. It is separated by distillation, - colourless, <sup>lies at 128°</sup> lighter than Water, - supposed to consist of Hydrogen & Carbon, & no Oxygen, hence it has been employed to preserve Potassium & Sodium.

The Magnesia combined with the Resin, & they then ab-  
sorb the Oil. -

It acts upon the mucous memb. of the Urinary & Respi-  
ratory organs. - In large doses, it sometimes <sup>prev. the</sup> purges -  
Sometimes it produces an eruption upon the Skin, some-  
times like measles. -

The resin is hard, brittle, transparent, - brown colour.

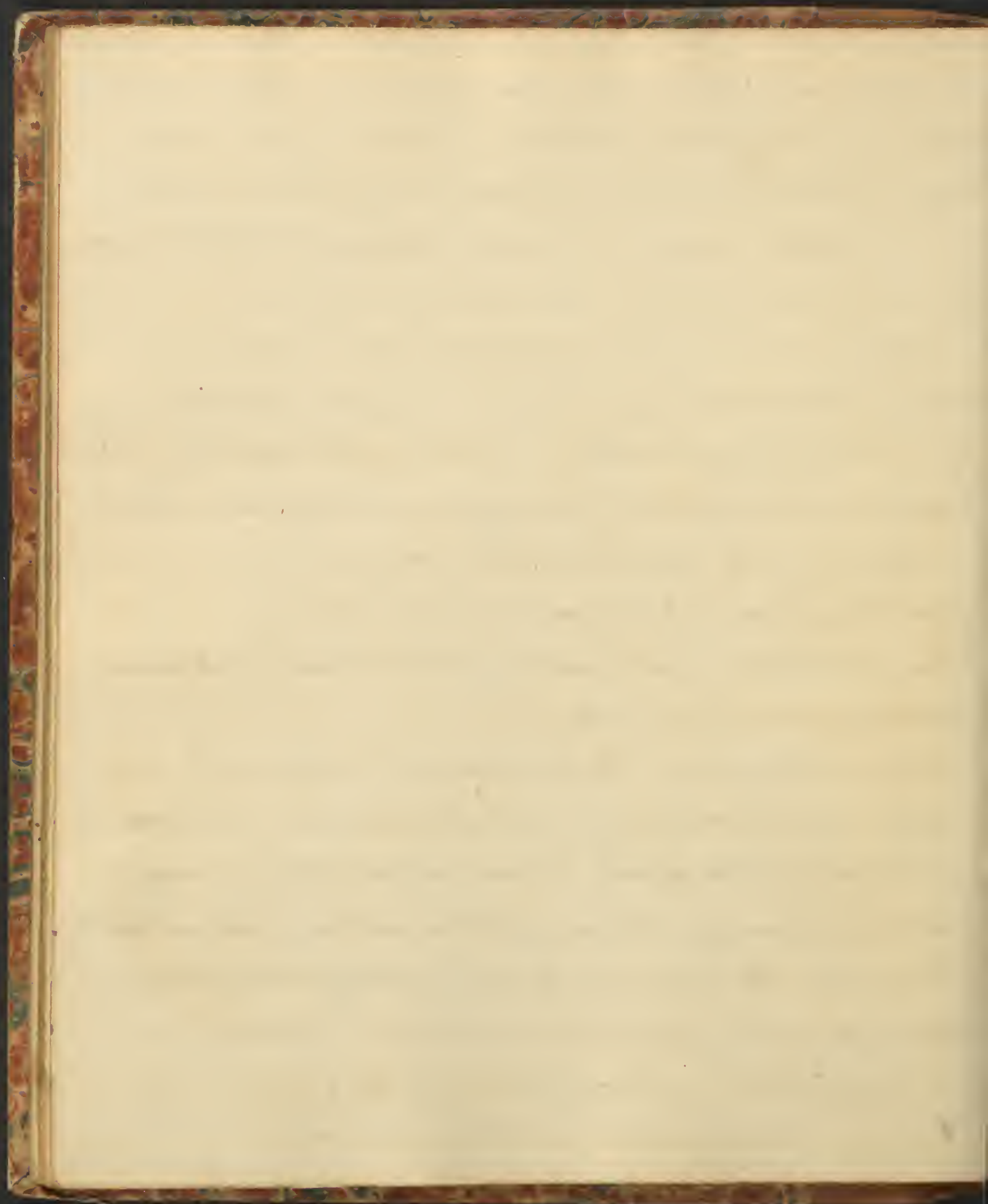
Copail. triturated with about  $\frac{1}{16}$  its weight of Mag-  
nesia solidifies so as to be made into Pills. - They  
must be rolled before the mass becomes too hard;  
the oldest solidifies in the shortest time. -

Copaila is not often adulterated with the fixed  
oils or Turpentine. - The fixed oils are detected by  
being insoluble in Alc. - Castor oil may be de-  
tected by taking a teaspoonful, putting it in Water  
& evaporating to dryness; if the remainder be dry  
& brittle, it was pure. - Or add Ag. Amm. & if there  
be no adulteration, it will first become turbid, but  
afterwards clear. -

It is gently stimulant, diuretic & laxative, - in  
large doses producing heat & nausea. - It imparts  
its odour to the urine; & may excite strangury. -

It is given in affections of the mucous membranes.  
Dose 20 or 30 drops 3 or 4 times a day, - or 10 drops  
more frequently repeated. - It may be given in Pills  
or Emulsion, or dropped on Sugar. -

Dose of the volatile oil, 10 drops. -





Turpentine, - is a name applied to a peculiar vegetable juice consisting of resin dissolved in volatile oil, - & generally procured from some species of Pine. -

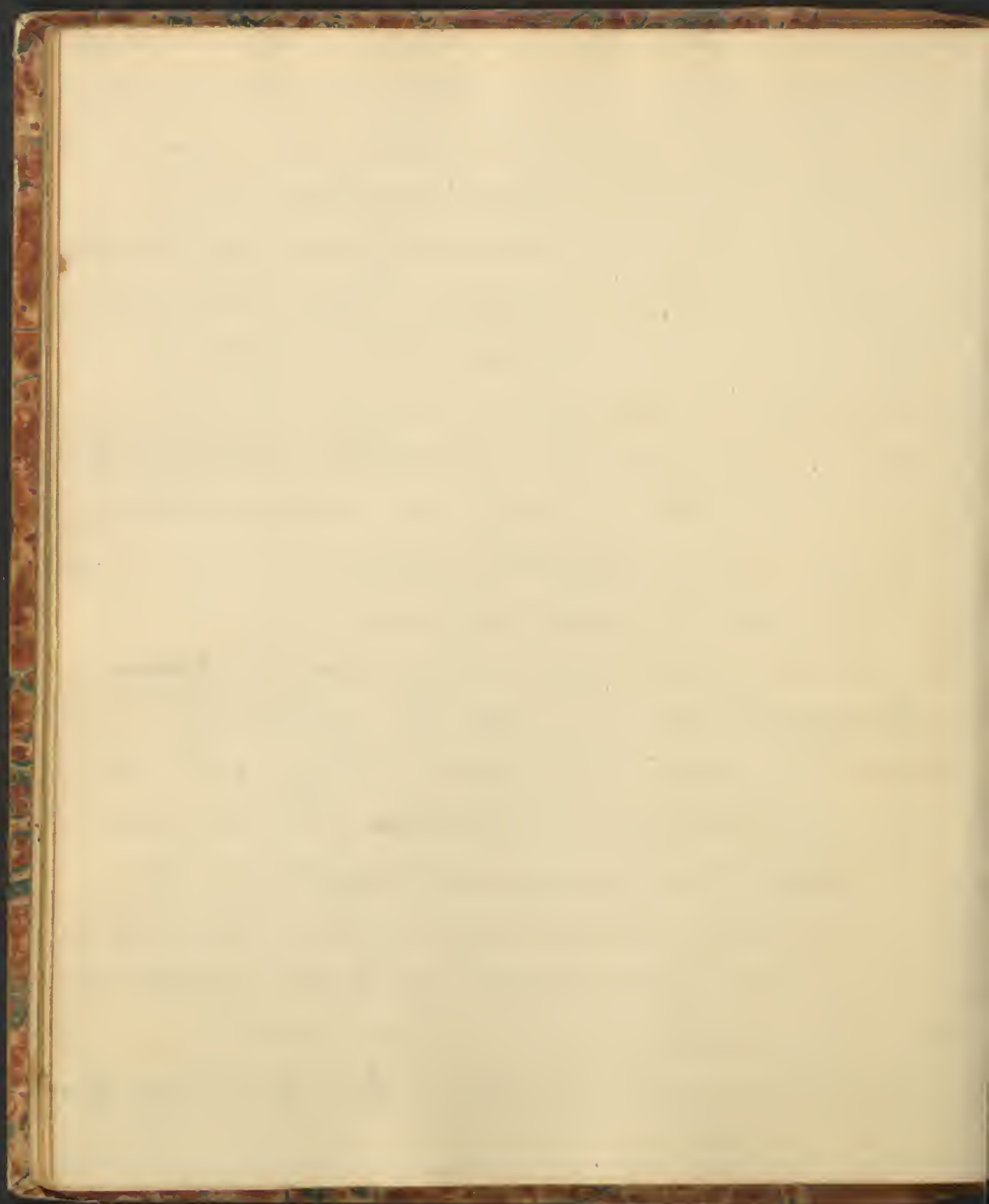
Several varieties of Turpentine are found in the shops, - Pa. red White, - Venice, - Canadian, - Italian, & Strasbourg.

White Turpentine - Terebinthina (U.S.) is obtained from the Pinus Resinosa, - a large tree growing in N. Carolina & Georgia, - & called Scotch Pine. - It supplies nearly all the Turpentine in the U.S. - & besides some which is exported.

About the middle of March, an incision is cut around the foot of a tree to the depth of 3 - 4 in. - into which the resin flows during the season. - From these it is clipped out ~~during the~~ & put into casks, where it thickens. -

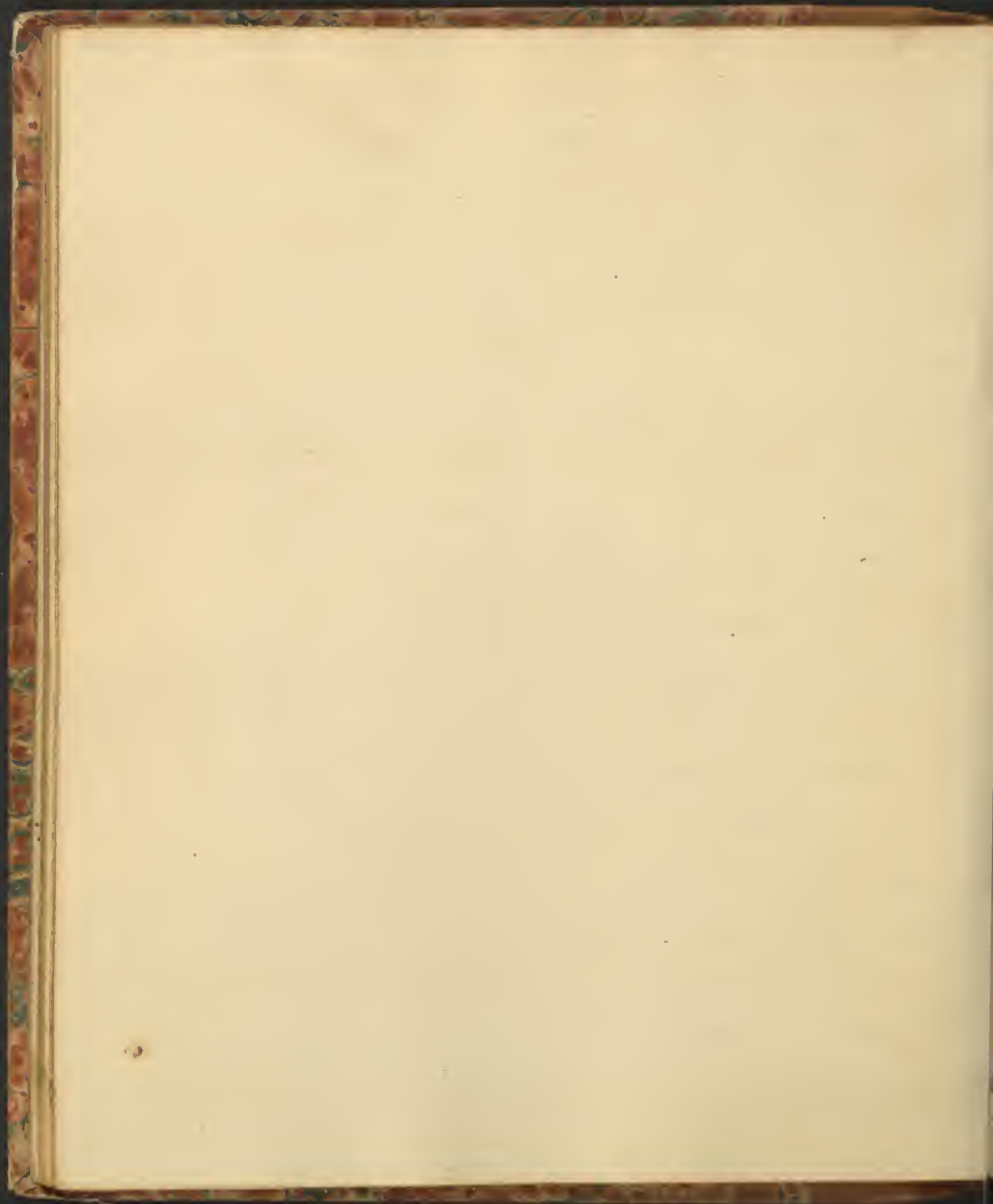
That which is used by the English & French is from the P. S. resinosa or Scotch Pine, - & P. Australis. <sup>My Turpentine</sup> It has a peculiar aromatic odour, - a warm, pungent, slightly bittern taste, - & of a whitish or pale colour, - & its consistence varies with the temperature of the weather. - If it be long kept, & exposed to the air, it becomes hard, solid & brittle. -

This, hardened on the trees, forms Frankincense, - Thur



Canadian Turpentine, - formerly called Canada Balsam, or Balsam of Fir, is not a Balsam, because it contains no *Bursera* &c. It is the product of the *Pinus Balsamifera*, - or *Abies Balsamifera*, a straight, elegant tree, growing in the northern parts of our Continent, in Canada, - i. e. Maine, N. Brunswick &c. - It is collected by breaking the blisters which form on the tree, & allowing the fluid to run into a bottle. - It is translucent, of a whitish or yellow colour, - of the consistence of Copraiva, has a bitter, terribusinate taste, - an aromatic odour, & contains more vol. oil than the former variety.

Pinus Turpentine, is procured from the *Pinus Sarg*, a tree growing on the Continent of Europe, abundantly in Switzerland & Western part of France. - It derives its name from the port whence it is shipped. - It is procured by boring a hole in the tree, & conducting the pitch thence by wooden troughs into tubs. - It is yellow, of the consistence of Honey, - has a less disagreeable taste than the former. - It is, however, very seldom found in the shops. That which is sold under this name, is a fictitious article.





composed of Pitch, - Oil of Turpentine, - & White Turpentine.

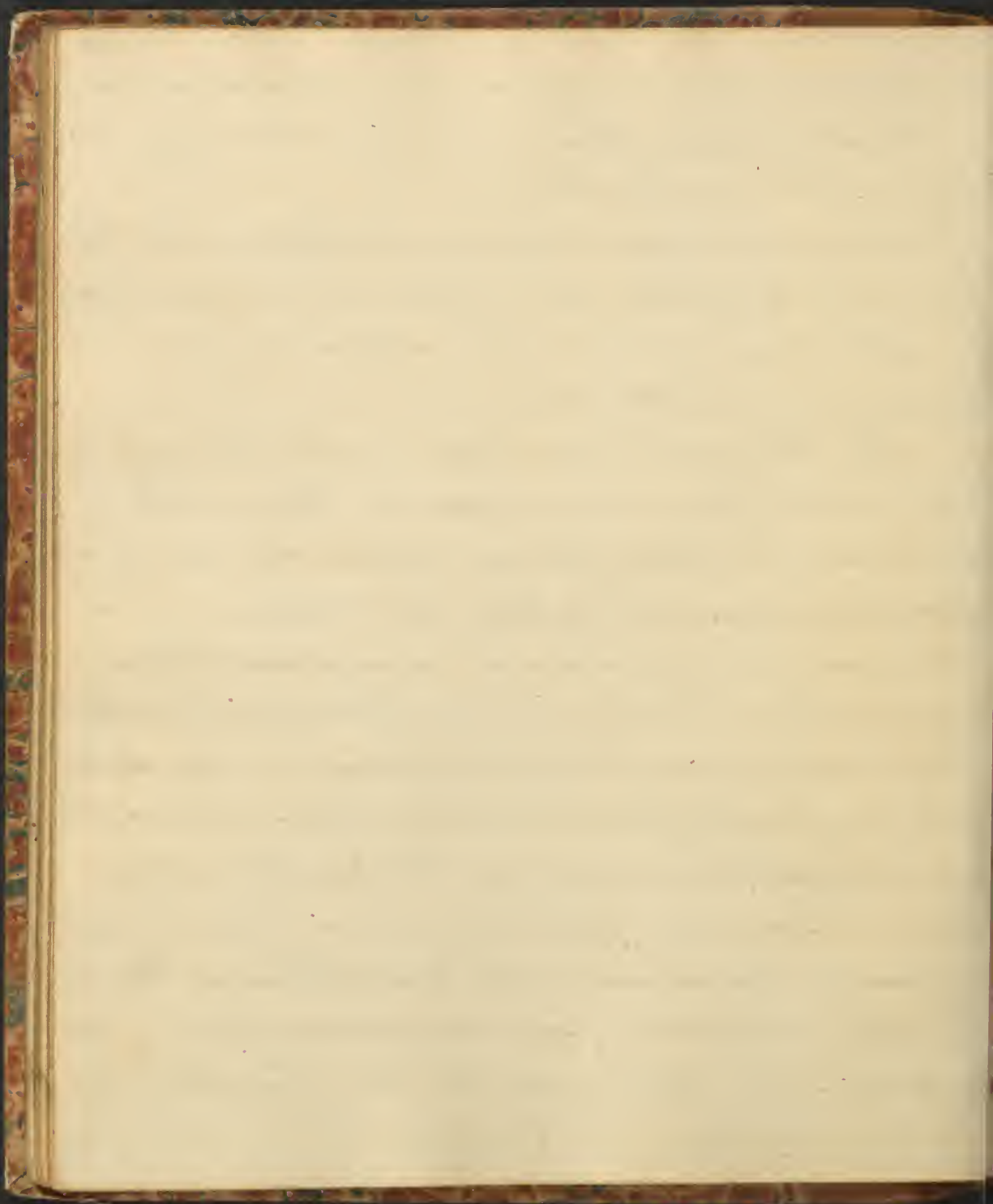
Strasbourg Turpentine, - comes from Germany, & along the borders of the Rhine. -

Chian or Capivi Turpentine is seldom brought here, it is the product of the *Pistia Terbinthifera*, growing in the island of Socotra. - It is a thick tenacious liquid, of a pale yellow colour.

The Turpentine is inflammable, - burning with a white flame & much smoke. - They impart a slight flavour to Water, but are insol. in it, - soluble in Alcohol, - & consist of an Oil, Resin & Succinic Acid.

They are stimulant Diuretics in large doses, Cathartics, but for internal use, they have been superseded by the Oil. They are useful in complaints of the kidneys & urinary passages, - & by some physicians have been highly esteemed for a remedy for Sciatica, Strangury, & Chronic Catarrhal affection. Dose is from  $\mathfrak{ss}$  to  $\mathfrak{z}$ , - given in Oil or Emulsion. Externally they are used as stimulants to Chronic Ulcers.

Tar is Turpentine partly decomposed by heat in its preparation. It is obtained from the *Pinus Palustris*. - The method of preparing it is, to cut the old dead trees into

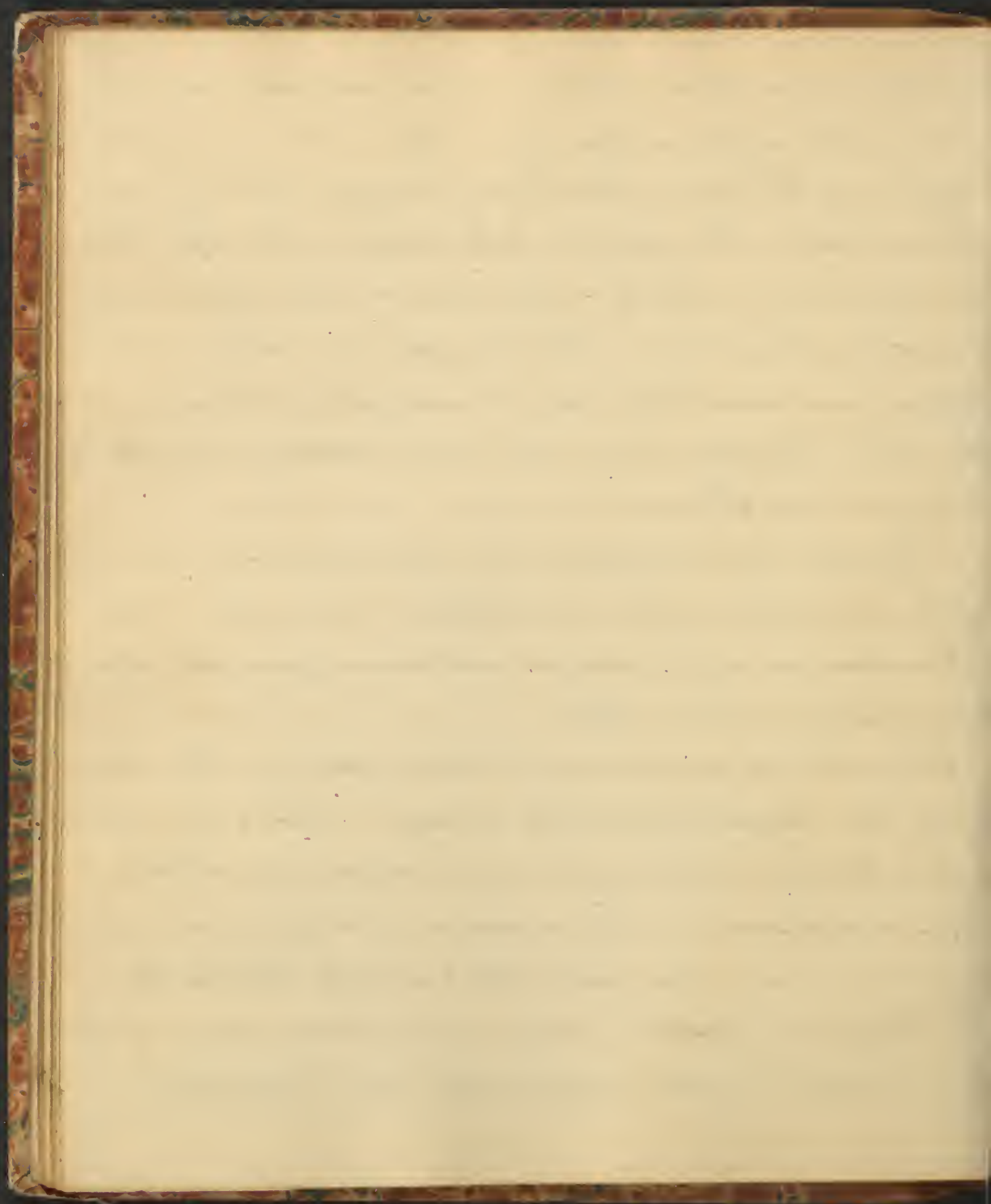


billets, - & heap these together in a conical pile, covered  
with earth, except an opening on top, & having a ditch  
 dug round the base, - with which the upper opening com-  
municates. - Then set fire to the heap on the top; & the  
tar runs down into the ditch, - whence it is dipped out  
& put into barrels - It has a peculiar odour - black  
colour, - an acid bitter taste, - is composed of Resin, Stearic  
Acid, Kreosote, & some other less important constituents  
coloured with Charcoal. -

Kreosote is always produced when wood is burnt - it  
is the preservative power in smoke, - also in Tar & Soot.  
It is obtained by a long process - has a peculiar odour,  
& is slightly soluble in Water. -

Tar yields its constituents to Water forming Tar Water  
(Aq. Res. Siquidae) which is used in Chinese Lustre.  
Tar Ointment is composed of equal parts of Tar & Suet.  
This mixed with an equal portion of Sulphur forms an  
excellent remedy for Scald Head, - Milk Itch &c. -

Pitch is Resin deprived of its ess. oil by Evap.  
It is impure, - & not used much here in practice. -





Resin remains after the Oil has been distilled from the Serpentine. - There are two kinds, - White & Yellow, of which the White is nothing more than the Yellow mixed with water while liquid & then allowed to con-  
crete - The Yellow is fixed, brittle - semitransparent, - softens at a moderate heat, - has slight odour & taste, - it is used in Ointments & Plasters; - it is the basis of the Basilicon Ointment, (Conat. Resinae), - of Adhesive Plaster. -

Its fumes are sometimes used for Catarrhs, - by throwing some Resin on a heated shovel & allowing the patient to inhale the fumes. - Vapours of Tar may also be similarly applied for the same purpose. -

The Oil of Serpentine is by far the most important. It is obtained by Distillation, first adding Water to prevent injury from heat. - It is limpid, colourless, is lighter than Water, - has a peculiar odour & acid taste, is sparingly soluble in Cold Alcohol, - but readily by boiling, - & contains some small portion of Succinic Acid.

If a stream of Chloristic Acid be passed through while the Oil is kept in a frigorific mixture, a product will re-  
sult resembling Camphor. -

*Cl. Terebinth.* - is also an excellent Anthelmintic. *see D. p. 85*

The Res has a strong determination to the Urinary organ giving a violet colour to the urine; producing some irritation; & even bloody urine. — It is useful in Dropsy, & when stimulants are needed; in Chronic Nephritic Affections; Lencorrhoea, Gleet, & Chronic Debility of the Urinary organ. By some it has been highly esteemed in Scarcia; Scurvy, & Chronic Rheumatism. — It has also proved very beneficial in Ulcerations of the Intestines, accompanied with great Debility. — Dose is 10, 15, or 20 Drops given on Sugar or in Emulsion. — If the case be Chronic it may be given 2 or 3 times a day; — if acute give it every 2 or 3 hours. — The dose of ℥ss to ʒi, it purges. — When long kept, & exposed to the air; it attracts Oxygen, & forms a Resin, from which it can be purified by Cold Alcohol; because cold will dissolve the Res very sparingly, & will take up the Resin. —

It is said by some to have received its name from a country in Africa called *Ammonia*; - by others, - from its having grown in the centre of the Temple of *Jupiter Ammon*.

It consists of a Resin, Gum, & Volatile Oil.



Forty Third Lecture March 1. 1834

Ammoniacum. Ammoniac. - The plant which yields this gum has been much disputed. - It was first thought to be a species of Torula; - afterwards Milledenow supposed it to be derived from Heracleum Scumiferum; - but it is now said to be the product of Dorema Amm. -

The ammoniac plant grows in the interior of Persia, S. of Ispahan, &c. - is herbaceous; - it is punctured by an insect, & from these punctures, the juice exudes, & concretes. It comes from London or East Indies to our market, in two forms; - either in tears or, masses. - Tears are of a yellow colour externally, - almost white internally, glossy, smooth, brittle, & hard. - The masses are composed of tears agglutinated together with a darker substance, & less fine than the tears. - The odour of Am. is peculiar; - taste, warm & bitter. - The tears are the best for medical use; - but for Plasters the mass is sufficiently good. It is partly soluble in Water, forming a milky emulsion, called Lac Ammon. - With Alc. it forms a clear solution, but is not wholly dissolved, because it is a gum-resin. When heated, it softens, but does not melt. -

It is used in Chronic Pulmonary affections &c. when the patient is unable to expectorate. A mixture highly recommended for the early stages of Consumption consists of -

Succ. Ammoniac

℥ij

Acid. Nitricum

℥ij

Aqua. Pura

℥viij

*Ammoniac* is stimulant & expectorant, & in large doses cathartic.

Dose from 5 to 15 or 20 grs. - It is also sometimes applied in the form of Plaster, as a discutient. -

Gambanum, - comes from the Levant, and is the concrete juice of a plant growing in Arabia. - It is usually in masses of whitish, red or yellow tears agglutinated together. - It is hard & brittle in cold, but soft in hot weather, & can be fused by heat, sufficiently to be strained. - Odour, alliaceous, - taste, bituminous & warm. - It is partly soluble in Water, - partly in Alcohol. - It contains Gum Resin & a volatile oil. -

It is seldom given internally, - but externally is sometimes applied in the form of the Emplastr. Gamb. Comp. - Dose intern. 10 to 20 grs. -

Sagapenum, - comes from Alexandria, Smyrna & other ports on the Levant, - but is an inferior article & at present, not used. -

Myrrha. Myrrh. The source of this was for a long time unknown. - It was thought recently to be the product of the *Amyris* & *Cataf*, growing in Arabia, - but it is now

From the *Styracis Myrta* or *Balsamococcus Myrta* -

Described a time for running water, that it is  
proper speaking a *Styracis*. - The *Styracis*

Described in *Styracis* *Balsamococcus* *Myrta*  
- *Styracis* & the *Styracis* *Styracis*  
1844, 1845 - *Styracis* *Styracis* - but with <sup>1845</sup> *Styracis* *Styracis*



thought to be derived from the *Balsumodendron Myrrae* which grows in the S. E. part of Arabia. The juice exudes & concretes on the bark. - Some of it is sent to Calcutta & C. Indies; & others to the Levant Ports, - & thence we get 2 varieties in our market, - The India & Turkey Myrrh, - the former of which is inferior to the latter, & in small irregular fragments. -

Turkey myrrh is lighter than India, - in small masses, of a reddish colour, - & almost <sup>translucent</sup> transparent. -

India is darker, - less translucent, - mixed often with impurities; <sup>Myrrh has a</sup> strong, peculiar odour, - bitter, aromatic taste; - brittle & inflammable, - infusible, - heavier than Water, - soluble in Dil. Alc. - watery solution is milky, - alcoholic, clear. -

It is a stimulant tonic, - expectorant & emmenagogue. Generally given in combination. -  
Dose is from 10 to 30 grs. -

The Tinct. is made with Rect. Spirit, because this dissolves the active matter. - It is generally used in external applications, - for spongy gums, - sore-mouth &c. - Generally dilute it: - than it is turbid. -

*Guaiacum* <sup>Wood.</sup> is called also *Lignum Vitae* & *Lig. Sanctum*.

*Guaiac* appears particularly applicable to cases of Amen. or Dysmen. - connected with *Stenocycia*. -

Dr. Ferrius considers it a specific remedy in gonorrhoea & says he has never known it to fail in cases proper for its use. *Li. Liq.* is no better than the *off. Liq.* - *Li. Liq.* in *Li. Liq.* - 3 times a day. - *Li. Liq.* more efficient when there is no uterine excitement. - Ferrius recommends it also in *Dysmenorrhoea* - has been used with success. -

In Chronic Rheumatism, <sup>*Li. Liq.*</sup> it should not be given without previous depletion. Useful also in Gouty Affections <sup>*Cutaneous Imp.*</sup> Given principally for its alterative influence. -

Guaiacum. Guaiac. - The concrete juice of the G. officinale; - obtained, either by spontaneous exudation, - by cutting the wood in billets, boring a hole thro' & placing one end in the fire, while the gum flows from the other, - or by rasping ~~the~~ the wood, boiling it & skimming off the matter which rises. - Hence, we receive it in various forms, from the N. Indies & S. America. -

The pieces generally are of a dark, brown colour, in masses, intermixed with fragments of raspings. - <sup>in tears</sup> Odour is feeble, - taste, first weak, - afterwards acid, - with a brittle, shining <sup>red</sup> fracture; - <sup>inflam. - softens by heat.</sup> pulverisable, yielding a powder, at first gray, becoming green on exposure, - heavier than Water & melts at a moderate heat. -

It was formerly considered a Gum Resin, but is not now: - is sol. in 95 pr. et. Alc. - is analogous, but different from resin, & appears sui generis, Guaiacum. - It is stimulant, diaphoretic & alterative: - I have been found very beneficial in Chronic Rheumatism. Dose from 10 to 30 grs. - With Alkalies it forms Soap - Dose of Linct. & sol. Linct.  $\mathfrak{f}\text{ij}$  to  $\mathfrak{f}\text{ij}$ , - 3 or 4 times a day. -

<sup>12</sup> Balsam of Peru is liquid. -

<sup>13</sup> Balsam of Tolu is solid. -



The Balsams have the general properties of stimulating the secretions.

Myroxylon. Balsam of Peru. The juice of the Myrox. Peruvianum, - a tall & beautiful tree growing in S. America, - Peru & Colombia. The tree is wounded, & a juice exudes, which is at first liquid, but afterwards becomes dry. - This is properly the Balsam of Peru. - The Balsam of Peru of our shops, is obtained by boiling the twigs, bark &c. - is a dark, viscid, semifluid substance, - with a pleasant odour, - bitter, slightly pungent taste. - It contains resin, vol. oil & Benzoic Acid, & these properly are the constituents of true Balsam. - It is heavier than Water, - inflammable, - sol. in Alcohol. -

It is a warm stimulating tonic, & expectorant, but little used at present. Dose,  $\frac{j}{ss}$ . - in gum solution. -

Solulanum. Goleu. It is doubtful from what plant this is derived, but probably from the Myrox. Peruv. and Myrox. Soluiferum. - It is brought from Carthagena in calabashes. - At first, it is soft & tenacious, but afterwards becomes solid & brittle. It is of a light reddish

The most common may be said to be the one  
by the number of small pictures contained in it.  
It is usually in black, other colors are not used.  
I must say that, without doubt, the  
very best of it is by the artist. - As a picture, it is

brown colour, - fragrant odour & balsamic taste. Its  
chemical constituents are resin, vol. oil & benzoic acid.

It is a stimulant tonic. - Dose from 10 to 30 grs. -  
Tinct is feeble. Syrup is almost inactive. - -

Benzoinum. Benzoin, comes from the East Indies.

It is in reddish-brown masses, - or sometimes in  
small white masses. - It is a balsam, & is used in  
Pharmacy for obtaining Benzoic Acid, either by  
sublimation, - or by extracting with an alkali, & pre-  
cipitating by an Acid. Benz. Acid is in small flac-  
escent crystals, & has an acid taste. -

Styrac. Storax, comes to us in 2 forms. - The liquid  
is a dark, viscid, tarlike substance from the Levant. -  
The other is coarse sawdust mixed with the liquid  
& necessarily a very impure article. - Seldom used. -

Acacie Gummi. Gum Arabic:- is derived from  
several species of Acacia, growing in Upper Egypt. -  
in Barbary & in Bengal, - by spontaneous exudation. -

It is sent here from various ports. Part of it comes  
from the Levant, - is called Turkey Gum, - & is the proper  
& purer Gum Arabic. - Coarser is called India Gum,  
from Calcutta.



in our first experiments, it is essential to find out  
the nature of the disease, and the state of the body.

It is essential, in the treatment of the disease, in the  
position of the body to the position of the body.

Sanctuary of the body, and the best of the body, to  
the body, a particular state.

Sanctuary of the body, and the best of the body, to  
the body, a particular state.

Sanctuary of the body, and the best of the body, to  
the body, a particular state.

Sanctuary of the body, and the best of the body, to  
the body, a particular state.

Sanctuary of the body, and the best of the body, to  
the body, a particular state.

Sanctuary of the body, and the best of the body, to  
the body, a particular state.

There are 2 kinds of Tatropha, which have the same bo-  
tanical characters, but the root of one of them is poisonous  
- it must be heated to render it inert. -



Turkey Gum is light, of a yellowish colour, sol. in Water. India, is part like the Turkey & part more red, & should be sorted for the sake of purity. -

That from Senegal, is in fragments, - rather redder, & inferior to the Turkey variety. -

Gum forms a mucilage with Water. - This becomes sour if exposed for 3 or 4 days.

Forty-Ninth Lecture. March 4. 1834.

Chagacantha. Tragacantha, - is derived from several species of Astragalus, - growing in Syria, Arabia &c. It is brought to us from the Levant. - It exudes spontaneously & hardens on the bark. - It is in pieces of various sizes & shapes, - of a dirty white colour, - translucent but dim. - It is used as Gum Arabic, but is less convenient because it is insoluble in Water. - It is employed in Pharmacy. chiefly in decoctions. -

Tapioca, is obtained from the root of Tatrophea Manihot, - or Cassava plant, growing in W. Indies and S. America. - The root when raw is poisonous, but when heated it becomes good for food. - The juice is expressed from the root, & upon standing, deposits a sediment, which, when washed & dried, - is Tapioca. -

the market are excellent but in the winter, there are  
no more, it is necessary to see that it is tried to keep  
to find all the rain must be dissolved — *Fit to* —

to the victuaries, Maranta, now in S. America, (C. H. H. H.)  
in Georgia & elsewhere —

It is not an accident that in the summer (unpleasant)  
the rain must be moved by the wind, which is

It is partially soluble in cold water, & wholly so in boiling water, - making an excellent diet. - It is found in masses of various sizes. - Pearl Tapioca, is in small round spherical grains, - is obtained from Germany, & probably not the product of the Cass. Tree. It has, however, similar properties. -

Sago, - is obtained from the pith of plants growing in the E. Indies, - more especially of the Sago Palm, which grows there in abundance. -

The trunk is cut into billets & the pith scraped out, then mixed with water & agitated. - The water is then drawn off, & a sediment is deposited, which is Sago; - This is then worked into round masses for Commerce. -

Pearl Sago, - is more pure, - it is made in <sup>Is. of Sumatra</sup> China, perhaps by the application of heat, but uncertain. - Its chief constituent is Starch, - as in Tapioca. -

Maranta. Arrow-root, - is pure Starch, - & is prepared from plants growing in the N. Indies. <sup>M. arundinacea</sup> - The roots are bruised, subjected to water, agitated &c. - It is also prepared from other plants in E. Indies, - South Sea Islands &c. - In this country, prepared Potatoe Starch is too often substit-



... of it - then it may be that a ... could be  
... ..  
... ..  
... ..  
... ..



tuted for it. - When imported from abroad, it is apt to be musty; consequently we must guard against it.

Salep. - is the root of the orchis mascula, growing in Europe; - a bulbous plant. - The bulb is introduced into boiling water & dried. - It has an irregular shape, - is of a light brown colour, - translucent, - hard, and brittle. - Constituents are something like Trapaeanth.

We now come to the astringent substances. -

Catechu. The source of this was long unknown, & it was once called Terra Japonica, - but it is now known to be the product obtained from the Acacia Catechu, which grows in Hindostan. - The wood is chipped & boiled, - & the decoction strained & evaporated. - It is obtained also from other sources, - as from the Potelmus, which is of a conico-spheroidal shape, - dark reddish brown internally, with whitish veins. - Contains much Tannin, - & is used for Toot's powder, by first reducing it to Charcoal, then powdering.

Catechu is in various shapes, of a dull reddish brown colour externally, - brighter internally, - with a shining fracture, - some lighter colour than others. - The best

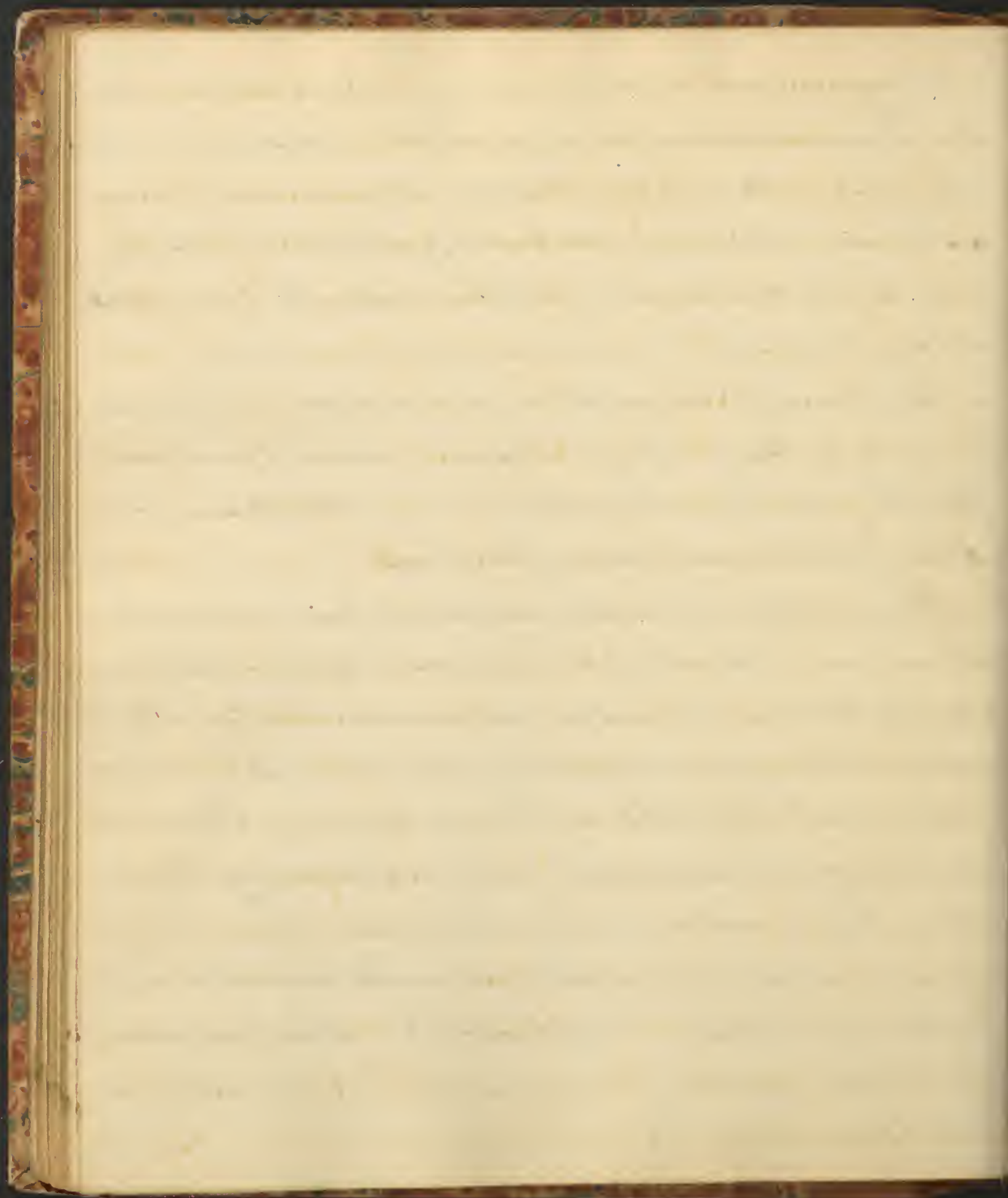


heavy, compact, brittle, - breaking with a smooth fracture.  
It is often mixed with impurities. - It has moderately  
astringent, with a bitter taste. Its chief constituent  
is Tannin. - It is almost entirely soluble in Water,  
and its solution is incompatible with the incompat-  
ibles of Tannin. - *Infusum solidaginis, infusion of*

It is tonic & very astringent. - used in *Diarrhoea*,  
*Dysentery*, - *Hemorrhage*, <sup>For the Hemorrhage, let a piece be held in the mouth</sup> *Spongy gums* &c. - *Dose*  
<sup>slightly dissolved</sup> from 10 grs. to ℥ss. - Its best form is in solution. -  
*Dose of Tincture* ℥ss to ℥ij. —

Kino. Different substances have been sold under  
this name in the shops. - That now used is procured  
from B. Indies, - where it is prepared by boiling the  
leaves & twigs, - & evaporating the decoction. - It is  
called *Ambony's Kino*, - it is in pieces of various si-  
zes, shining, reddish brown colour externally, - brittle,  
& when powdered, the colour becomes more red. -  
Tannin is the chief constituent. - Its properties are  
similar to Catechu. - *Tinct.* loses <sup>by age</sup> its astringent properties.  
It is often applied locally in form of powder to ar-  
rest hemorrhage &c. —







The concrete substance which we shall last notice, may be considered as a stercorite. -

Camphora. Camphor, - is not confined to any one peculiar vegetable product, - but comes from several different sources. - Our commercial Camphor is derived from the Saurus Camphora, a tree growing in China & Japan. - The wood is chipped, - exposed to heat, & the Camphor sublimes. - This is picked and imported, then refined for the Apothecary. - It is then in concavo-concave cakes with a hole in the centre, which are broken up. - It has a peculiar odour, - with a taste, bitter, pungent, & followed by a sense of coolness. When recent it is almost transparent, - but becomes whitish when kept, - is brittle, friable, - with an unctuous feel, - tenacious, - hence it is necessary to drop a little Alc. upon it to reduce it to powder. - It has a shining fracture, is lighter than Water, & when thrown on water, swims about on the surface. - Exposed to the air for a long time, it evaporates. - It fuses at  $31^{\circ}$  - boils at  $400^{\circ}$ ; - is inflammable, - & when triturated with water, it



gives it an odour & taste, but a larger portion of it is dissolved by adding Carb. Magneticus. - It is soluble in Alc. & this is precipitated by Water, - sol. in Ether, - volatile & fixed oils, - & dilute Acids. - Its ultimate constituents are Carbon, Hydrogen & Oxygen.

It is somewhat stimulant and narcotic, - with a tendency to the head. - In an overdose, it is a narcotic poison. - Dose varies from 1 to 20 or 30 grs. -

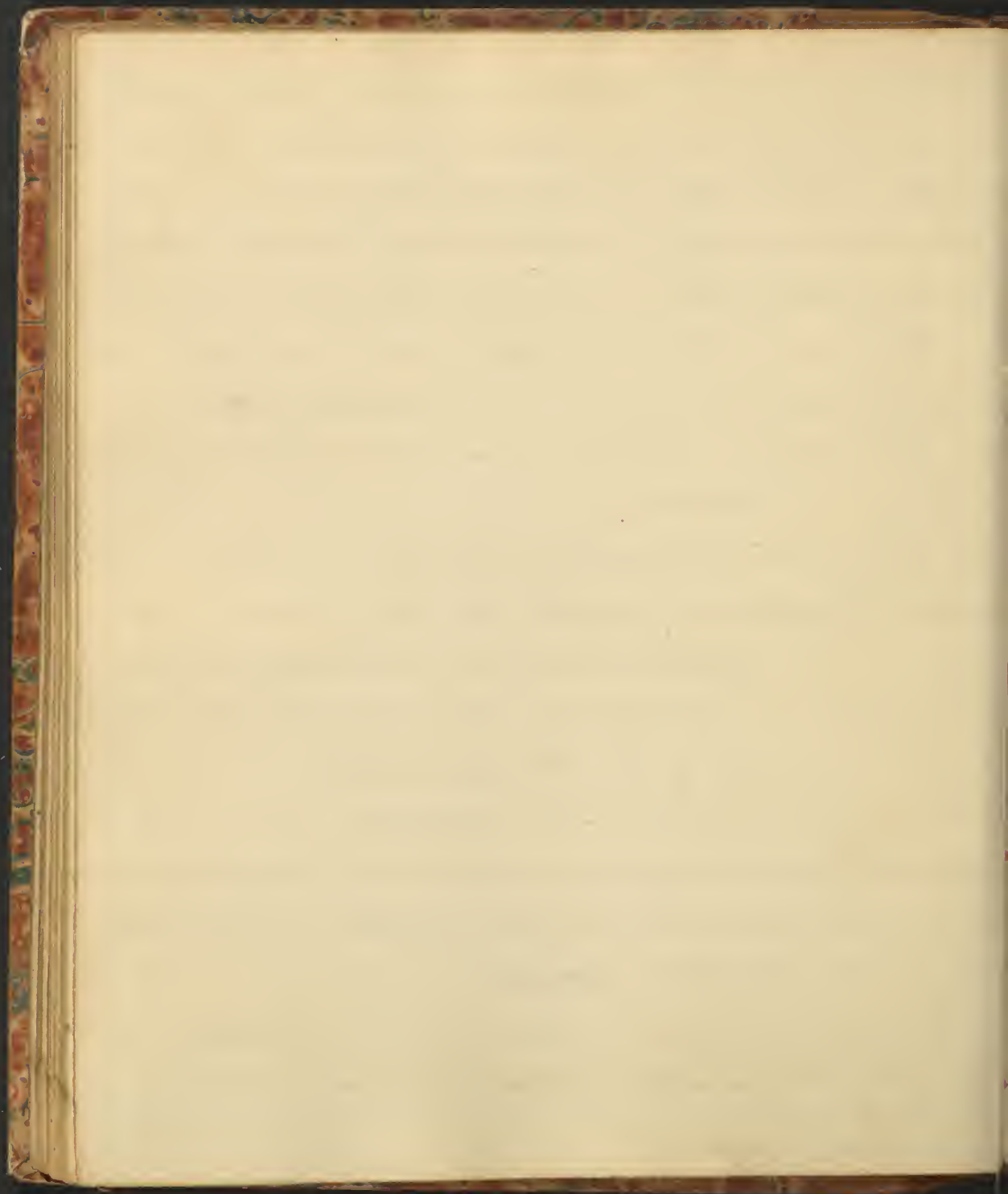
Giving it in substance, in form of pills is objectionable, because it is so slowly dissolved. - It may be given in Emulsion, - but the best plan is to mix it with a little Myrrh & Water. - It is used externally, dissolved in Alcohol. - Also Aq. Camphorae containing gr iij to ℥i. Dose ℥i to ℥ij. -

Here we may notice the distinction between two names, which may be confounded. - Opodeldoo is termed Linimentum Saps. Camph. - & not Tract. Saps. Camphorata. -

Tr. Saps. Camph. - is commonly called Soap Liniment. -

Lin. Saps. Camph. - is the proper Soap Liniment. -

Lin. Camph. - composed of Camphor & olive oil, is an excellent application to gouty affections. -







Shugra Opium is covered with leaves & reddish seeds like those  
of some species of Rock (Rumex); - is soft & singularly shaped. -



The absence of the envelope of leaves, and its position  
in relation to the adjacent characters. A sweet taste, or  
its forming a viscid solution with Water, would indicate a  
saccharine or gummy impurity. -

Codia has been recently discovered by Robiquet in 1836

Morpha is not, or very slightly sol. in Ether. -





The salts of Morphia are decomposed by small portions of an Alkali, - but if the Alkali be added in excess the precipitate will be redissolved. -

Sulph. Acid must be gradually added until the Morphia is dissolved; then evaporate & crystallize. -

all from Morphia, by mixing. Morphia is a white  
crystalline powder, which Morphia becomes red, -  
its influence upon the system is very uncertain, - it  
is said that 50 to 100 grs. have been given without  
producing any effects. -

Morphia is the narcotic principle of Opium. It  
is sparingly sol. in cold Water, freely in hot, but for a  
states are cooling, - it is sol. also in boiling Alcohol -  
It is crystalline, <sup>colorless</sup> bitter, insoluble in water, it is inert,  
inflammable, - because exposed to a moderate heat,  
but it forms a white powdery fluid. -

The alkaline reaction is as far as we have a test  
for detecting Opium. - We have said, first a test in solution  
of test of Lead, then the Reaction of Lead is precipi-  
tated - to this is the Sulph. Acid, which will set free the  
Morphine - then by adding a sol. of a salt of Lead,  
a white colored precipitate. -

It is more soluble in <sup>acid</sup> than in water. Acid & Contact of heat  
decompose Morphia, - formed by stirring (Mellanchiam)  
with a judicious quantity of Sulph. Acid. - It is in brown  
solid - white minute crystals, light, - sol. in Water, on

Muriate of Morphia is made either directly from the Opium  
- or by saturation as the other salts. - It is used in Edinburgh.

2. It is useful in Neuralgic Paroxysms, & in the secondary stages  
of Inf. (except of Brain) - combined with Tinct. Op. or Ipecac.  
When the disease is relieved by a secretion, of course Opium  
is not applicable, (except of the Skin). -



... 15 grains ...  
... it is ...  
... evaporate to dryness -  
... the ...  
... - medium about 1/2 gr. ...

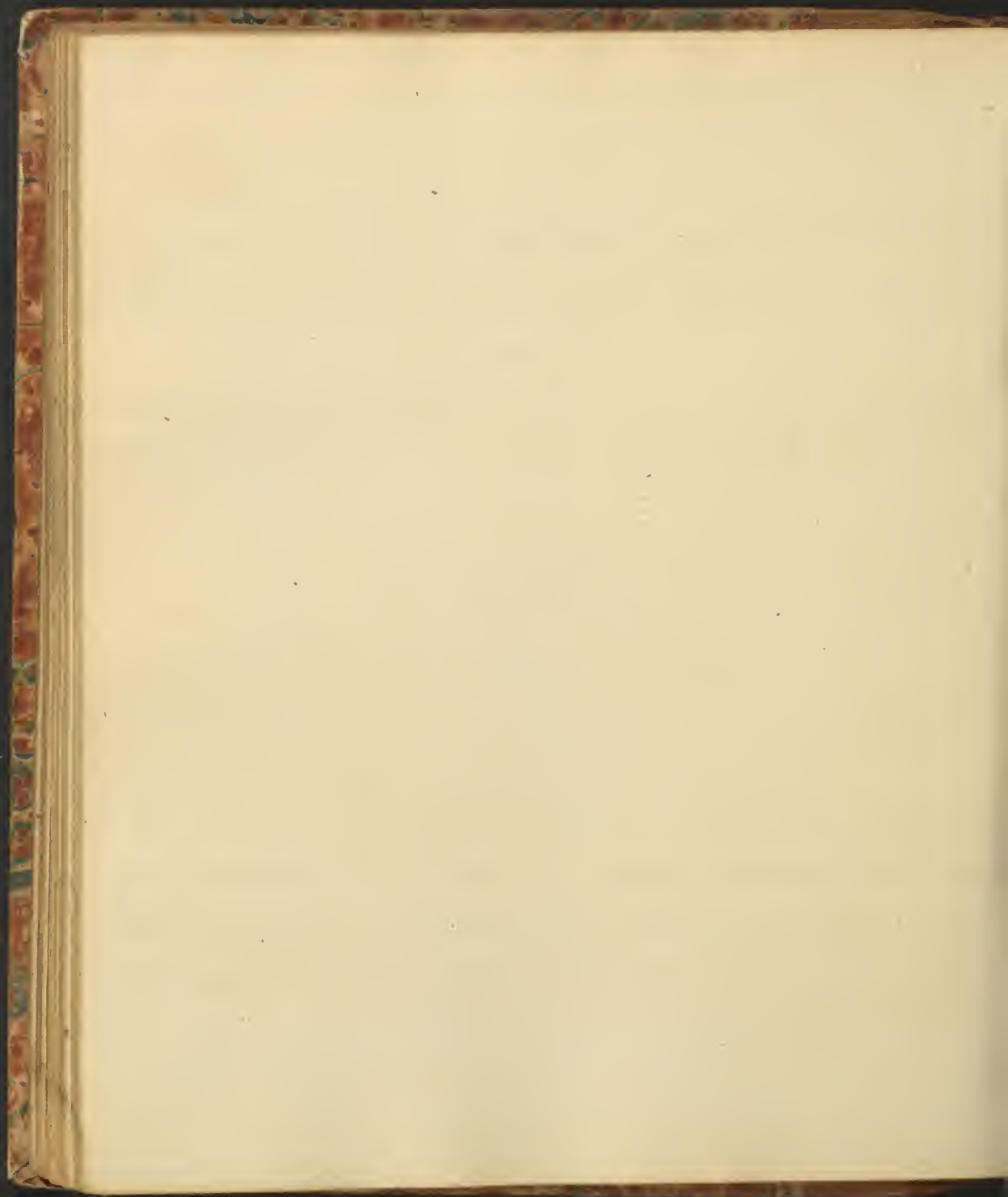
The ... is ... but the ...  
... because some of the Acet. Acid  
is driven off by the continuance of vap. to dryness, leaving ... insoluble. -  
... of ...

... in the ... - The ...  
... will ...  
... -

... it is ...  
... it is ...  
... Typhus without Def of Brain

... better than ...  
... many ...  
... it is ...

... the brain ...  
... upon ...  
... it may be ...  
...



and it is not possible to say. In some cases the  
respiratory system is affected - in some cases, not  
at all. In other cases it is not clear. —

It is important to know that, in the treatment of the  
respiratory system, the first step is to remove the  
excess of mucus, and to prevent further accumulation,  
by means of expectorants, with suitable  
nourishment, — in some cases, — in some cases, —  
the use of the steam-bath, &c. —

In the case of the respiratory system, the first step is to  
remove the excess of mucus, and to prevent further  
accumulation, by means of expectorants, with suitable  
nourishment, — in some cases, — in some cases, —

the use of the steam-bath, &c. — Since then it operates in so many ways, it is  
not surprising that it is not always successful in the  
same disease. —

From what has been said, we might suppose that  
the use of the steam-bath is improper — but we find it to  
be indicated in a high state of inflammation, and  
in some cases, it must first be removed. — In some cases  
it is sufficiently reduced, combine the use of the  
steam-bath with the use of the steam-bath, &c. —

To allay nervous irritation, give about  $\frac{1}{4}$  gr. -

Is a stimulant,  $\frac{1}{2}$  gr. every 3 or 4 hours. - For Sleep 1 gr. -

To relieve Spasms 2 to 4 grs. repeated every 2 or 3 hours. -





*A. 6-10-1841*  
Tinct. operates more speedily, - but sometimes it irritates the  
stomach, - composed of ℥i to ʒj Alcohol. -

020  
1/2

Tinct. Op. Camph. contains about ʒssij to f℥i - It is more stimulant  
than the former, - when mixed with Water, it renders it turbid, -  
from the Camphor & Vol. Oil. -

Tinct. op. Acet. is often advantageous where Laund. produces sick  
stomach, - headache &c. -

*See Stimulating &c*

The top of the column is used as a substitute for the  
 whole of the column, which is a common error.  
 The top of the column is used as a substitute for the  
 whole of the column.  $m \Sigma$

Liq. Morph. Sacph. - contains 1gr. to f3i. —

When taken in small quantities, the first observable effects are those of a general diffusible stimulant, with an increase of pulse, - of heat of surface, of the cerebral and nervous functions, - also exhilaration of spirits &c. -

After a lapse of from 20 to 60 minutes, there is a general calmness ensued, & the patient feels free from all trouble, so that even if it do not produce sleep, he feels happy & contented.

Sometimes however the thoughts are very unpleasant: -

Opium arrests the secretions (except from the skin) by diminishing the nervous energy, - or directing it elsewhere. -

If large doses have been taken, - the patient may be aroused by agitation, but immediately relapses, - begging most earnestly for Sleep. -

Long intervals of Respiration are good Diagnostics. -



so dangerous in their anæsthetic effects, - deeper than  
the most violent prostration or vertigo of the mind can  
be, - for it is a state of insensibility, -

It is so violently powerful, that may be applied to  
the most dangerous in disease, - hemorrhage; obstruction  
of the bowels - It may be applied to the most violent -

These effects are taken in our cases, - when the  
action of the brain of the spine are suspended, & the re-  
sulting motion of the intestines, ceases. First, there  
is an insensibility felt, - a sort of a torpidity of the  
brain, - a sort of a torpidity or prostration of the  
power. - In some large quantities, <sup>taken</sup> the whole system  
appears - we find a state of confused insensibility, - a  
labouring <sup>apoplectic</sup> apoplexy, - confused intellect, <sup>my strong</sup> my strong  
insensibility. - The results of its immediate action are  
on the brain. - In 2 hours after taking the Dec, the  
debility ceases, - it is worst about 4 or 5 hours after  
the pulse becomes feeble, skin cool, & there is a state  
of insensibility, - so that no remedy can be applied  
to it of any kind. -

The stomach-pump is applicable where Laud. has been  
taken; but not when Opium is in the solid state. -

The patient should be kept walking about. -

of water to make a mass. It is used in decoction to cure  
the stomach, for which crushed & large quantities  
are used, and better than the strongest purgative  
applied only to the head for the same reason, having  
no danger to the stomach, the system must be made  
by constant plasters to the stomach - some with  
syrup of Marshmallows -

*Scirrhus* -

When in small quantities & contained in the  
stomach, in large doses, it sometimes produces  
indigestion, loss of appetite, & itching which  
ends in a malin eruption -

When applied by the rectum, it has been  
found to be less stimulating. —

It may be advantageously given as an Emetic, when  
the stomach is intubated, & cannot retain it. —

It is sometimes applied to the skin, as Lotion, ointment,  
boulties &c. - Sometimes it is used in Ophthalmia, - Leucor-  
hea, - Gonorrhea, with Astringents. -

There are some medicines which cannot be properly classed under any particular head, but produce upon the system, actions peculiar to themselves, & hence require to be treated of separately. - Among these we may enumerate Ergot, (see book B. p. 179) - Sty Bonivice (B. p. 171) - & next Arsenic, - which in the metallic state produces no effect upon the system, but becomes exceedingly active when chemically combined. -

In small doses, it at first produces no visible effect, but in larger doses, - ~~produces~~ a general warmth, - Edema of the Face & Eyes, which may gradually extend over the whole body, - Tausca, - Muscular weakness, - & in fact appears to combine irritation of the mucous membrane of the stomach & bowels, with a peculiar Arsenical disease, as it may be called. -

In large quantities, we know that it acts as a violent poison, producing Inf. of the mucous mem. if the patient lives long enough, - & extreme gonorrhea, prostration

We find a burning pain at the stomach, - obstinate vomiting, - great prostration, - cold & clammy surface &c. -



The object should be to evacuate it from the stomach by demulcent drinks, - & the only Antidote which has stood the test of experiment is the Hydrated Peroxide of Iron, - which must be freshly prepared by making a hot solution of Sulph. Iron & precipitating it by Nitric Acid. -

As a medicine, Arsenic is not applicable in irritable conditions of the stomach or bowels, - or in general debility of the system, - or in Scrofula, - On this side. -

But it is applicable in Intermittent diseases. -

Also in Cutaneous diseases, after the febrile stage. -

In Secondary Syphilis, - accompanied with nodes. -

The Arsenious Acid may be given in the dose of  $\frac{1}{12}$  gr. - made into a pill with bread. -

Fowler's Solution, - (Sig. Pot. Arsenit.) contains 64 grs. to Oj. - it may be given in the dose of 10 drops 2 or 3 times a day. -

In the administration of Arsen. Preparations, they should not be continued for more than one, - or at most, two weeks, without intermissions. -

Hydragyrum. - Mercury. - When the preparations of this medicine are given in very small doses, the first effects are such as may be classed under the general term, alteratives; next, that train of phenomena comprehended under the term Stygidium or Salivation. - This is attended with a peculiar jerking, quick pulse such as will enable an experienced physician to determine its commencement, even before the gums give much evidence of it; - there is also some general excitement of the nervous system. - It also produces an increase of the secretions; excites the action of the viscera; & in fact produces in the system what might be termed a Mercurial disease. -

From its operations upon the sphacels, it is applicable in Typhoid Fevers, with dry tongue, suppressed secretions &c. - Besides this, it produces in the whole capillary system a new action; a disease which naturally tends towards health; hence it is useful in Chronic Inflammations; Chronic Hemisy, Pneums. Erysipelas, Rheumatism; Typhoid Pneumonia &c. - often combined with Op. & Ipecac. -

It is more strongly directed to the capillaries of the Hepatic system than to others, & hence is peculiarly applicable to all Hepatic Affections. -

It stimulates the absorbents, & hence is appropriate for the removal of Chronic Tumours, - when not encysted. -

It may act in some measure as a Revulsive by the irritation it excites in the Fanoes &c. -

In some diseases, it is thought to subvert them by substituting its own action, - as in Syphilis, & although it has lately become fashionable to decry its use here, yet most probably the reason it has so often failed, & so often produced injurious consequences, has been the careless & indiscreet manner in which it has been applied. - The greatest danger we have to apprehend from it is Excessive Salivation. -

It operates in the same way in subduing Colic. Sicc. -

Tubercular predispositions are injured by it. - Physicians generally employ it as a last resort in all diseases; - after other remedies have failed, this is tried with the hope of revolutionizing the whole system, & establishing a tendency to health. -



It acts by being absorbed & entering the circulation. -  
 When we desire to produce Stygalism, give about  $\frac{1}{2}$  gr. or  
 1 gr. Calomel, - or from 3 to 5 grs. Blue Pill, 3 times a day.  
 If it purges add a little Opium. - If the stomach be  
 irritable, diminish the dose & repeat it more frequently. -  
 Sometimes it may be applied externally in the form of  
 Merc. ointment, - or if a more speedy impression be de-  
 sirable, by fumigations with the Red Sulphuret. -

Different persons present very different susceptibilities,  
 & hence caution is requisite. -

When the use of Merc. is to be long continued, it is  
 sufficient merely to affect the gums, in order to show  
 that it is acting. -

The first symptoms of this are a coppery taste, - then  
 slight soreness, - white streak round the gum, - increased  
 flow of Saliva, - fetid breath &c. - & if the medicine be con-  
 tinued, swelling, - ulcerations, - adhesions, Hemorrhage, &c.  
 The patient is more susceptible to the influence of cold,  
 but still it is not necessary to confine him strictly. -

Excessive Salivation must be palliated by Ast. Poudre,  
 & a Sol. of Alum, - Sulph. Lime, - Res. astring. - Green Tea, -



Tar Water or Crocodote Water &c. - Sometimes P.S. may be  
 necessary, or leeching. - In very bad cases, Blistering & Opium.

Sometimes, from Idiosyncrasy, or peculiar condition of  
 the patient, Mercury does not produce its normal effect, -  
 but prostration, fever &c. come on, & require caution. -

Mercury sometimes acts merely as an Alternative, -  
 especially upon the Digestive Organs & the Liver, & hence  
 is applicable in cases where the appearance of the Stools  
 indicate an irregular or unhealthy secretion of Bile. -  
 To produce this effect, there are two modes of applying  
 it, - either, give 1 gr. cal. or 2 to 5 grs Blue Pill at night  
 (or every other night) - & follow it next morning with some  
 mild aperient, as Ridditz Powder &c. - or give  $\frac{1}{6}$  gr. every  
 1, 2 or 3 hours. - Thus a very common prescription in

Cholera Morbus, - Diarrhea &c. - is Calomel grs. ij.  
 S. Give one every 2 or 3 hrs. - <sup>opium gr. j.</sup>  
 (gr. Pill No. XII. -)

There are 5 forms in which Merc. may be admin. -

1. Those preparations in which the metal is minutely di-  
 vided & partially oxidized. - 2. Oxides. - 3. Chlorides  
 4. Salts. - & 5. Sulphurets. - Under the first of these  
 heads, we may include Mercuriae Ointment, - which

is made by triturating Mercury with Sand. It is at first blue & becomes darker by age, probably, from the continuance of the oxidation of the metal, & hence is better.

Empastrum Hydrag. - made by rubbing the Mercury with Resin & Oil, & adding it to Lead Plaster. - It is used principally as an application to the skin in Chronic Hepat. affect.

Pilula Hydrag. - Blue Pill. - made by rubbing Merc. with Confect. Ros. - Each pile (offic) contains ʒjss, - in which is ʒj of the Mercury. - Dose ʒj pill 3 times a day. -

Hydrag. cum Cal. Carb. - is applicable to cases connected with acidity of the stomach; but is rather uncertain. -

Under the 2<sup>d</sup> Class, are 2 Oxides, Black & Red -

Hydrag. Ox. Nig. - by reaction between Cal. & Sol. of Potas. Its effect is similar to Calomel. - Dose ʒj 3 times a day. -

Hydrag. Ox. Rub. - made by exposing Nit. Merc. to heat - called Red Precipitate. It is very slightly sol. in Water. Is used ext. as an Escharotic & Stimulant. - Unguent. Hydr. & Unguent. Hydr. Simp. - applic. to specific Ulcers, - Sup. of Conjunction &c. -

Under the 3<sup>d</sup> head are 2 Chlorides, Mercurial & Corrosive -

Hydr. Chlor. Mite. - Calomel. - is obtained by sublimation then washed, & crystalized &c. -

Hyd. Chlor. Emrosianum. - is obtained by sublimation. -  
 It is in Chyalline, massed, which are heavy; sol. in Water  
 - very sol. in Ale. - acid, durable taste, - decomposed by  
 the alkaline Earths, - Albumen, - Gluten &c. - It is poisonous.  
 - Is less apt to salivate than Cal. - Dose  $\frac{1}{2}$  to  $\frac{1}{4}$  gr. -

Under the 4<sup>th</sup> head are the Sulphate, Ammo. - Nitrate.

Hyd. Sulphas, Flavus. - Suspect Mineral. - Emrose. -

Hyd. Aromatizatum, consists of Mur. Ammo. & Prop. Merc.

Nitrate of Merc. is used in the form of an ointment

Unguent. Hyd. Nit. - Citrine buttnut, - applicable to  
 cutaneous affections, - & much used. -

Under the 5<sup>th</sup> head, - are 2 Sulphurets, Red & Black.

Hyd. Sulph. Rub. is made by melting Sulphur & Merc. -

is called Cinnabar, or in powder Benilium, - is em-  
 ployed chiefly for fumigation, by throwing it on hot iron. -

Hyd. Sulph. Nig. - Ethiops Mineral. is made by trit-  
 urating Merc. with Sord. - It is never used. - It is not  
 chemically the Black Sulphuret. -

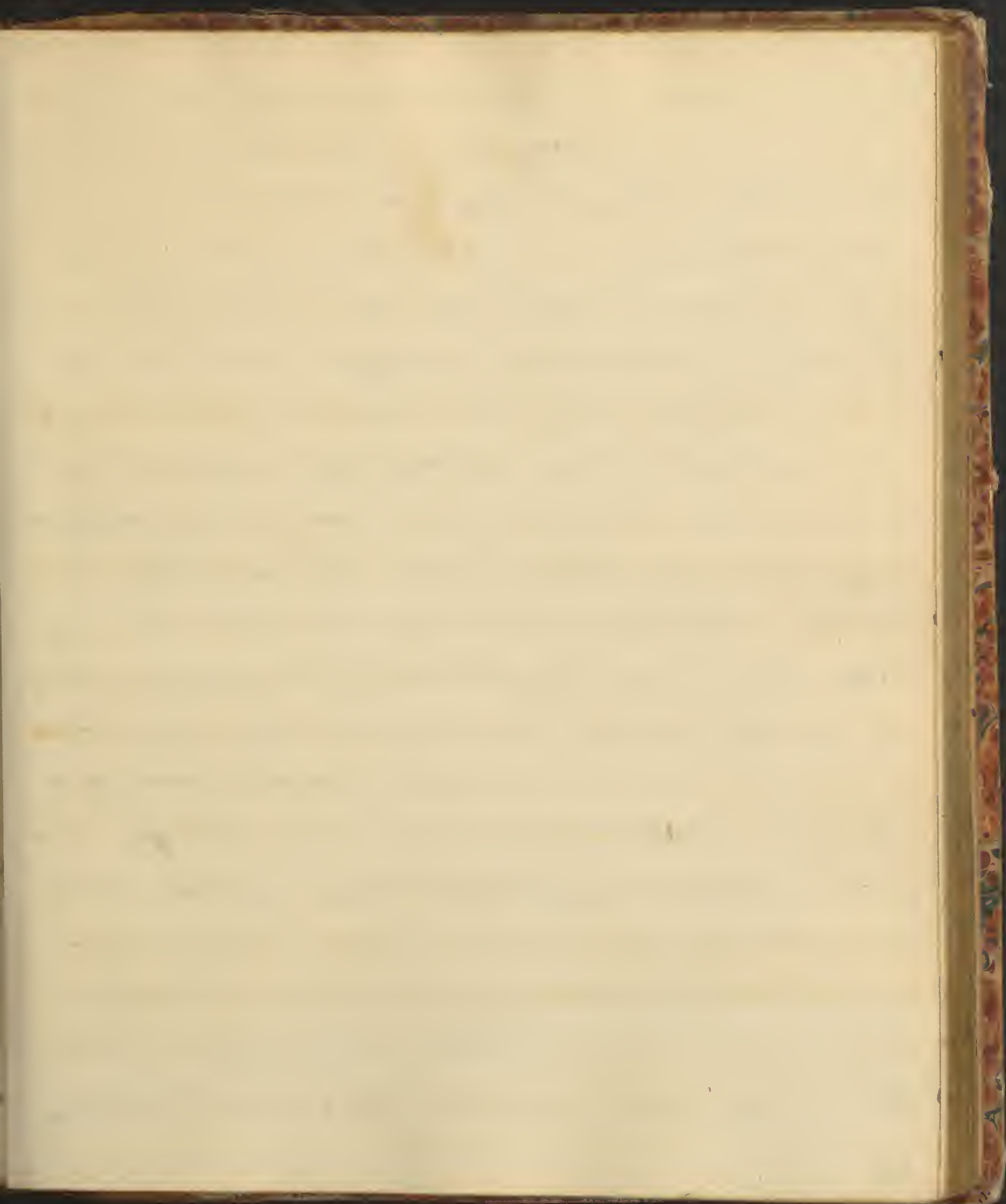


it often produces headache & giddiness. - It is  
 into readily with Alcohol & Water. - When very  
 concentrated, it is prone to become decomposed. -  
 It exists in the Cherry Laurel, - Bitter Almonds, -  
 Peach leaves & Heron's do. - Its constituents of 187.  
 Hydr. & 169 Cy - not condensed. - 261 27

It was discovered by Scheele in 1781. - but the  
 combination of its constituents was not determined  
 by Gay Lussac's work. -

It is well known to be a most deadly poison.  
 Large of it proving fatal. - Dose of the medicinal dose  
 is from 1 to 6 drops, given with caution. -  
 Its true character is, - but a good test for it  
 is Sulp. Copper, with which it forms a white cloud.





Crucic Acid is off in that of M.S. Phosphate

Acidum Phosphoricum. Quat. -

Acidum Phosphoricum - U.S. -

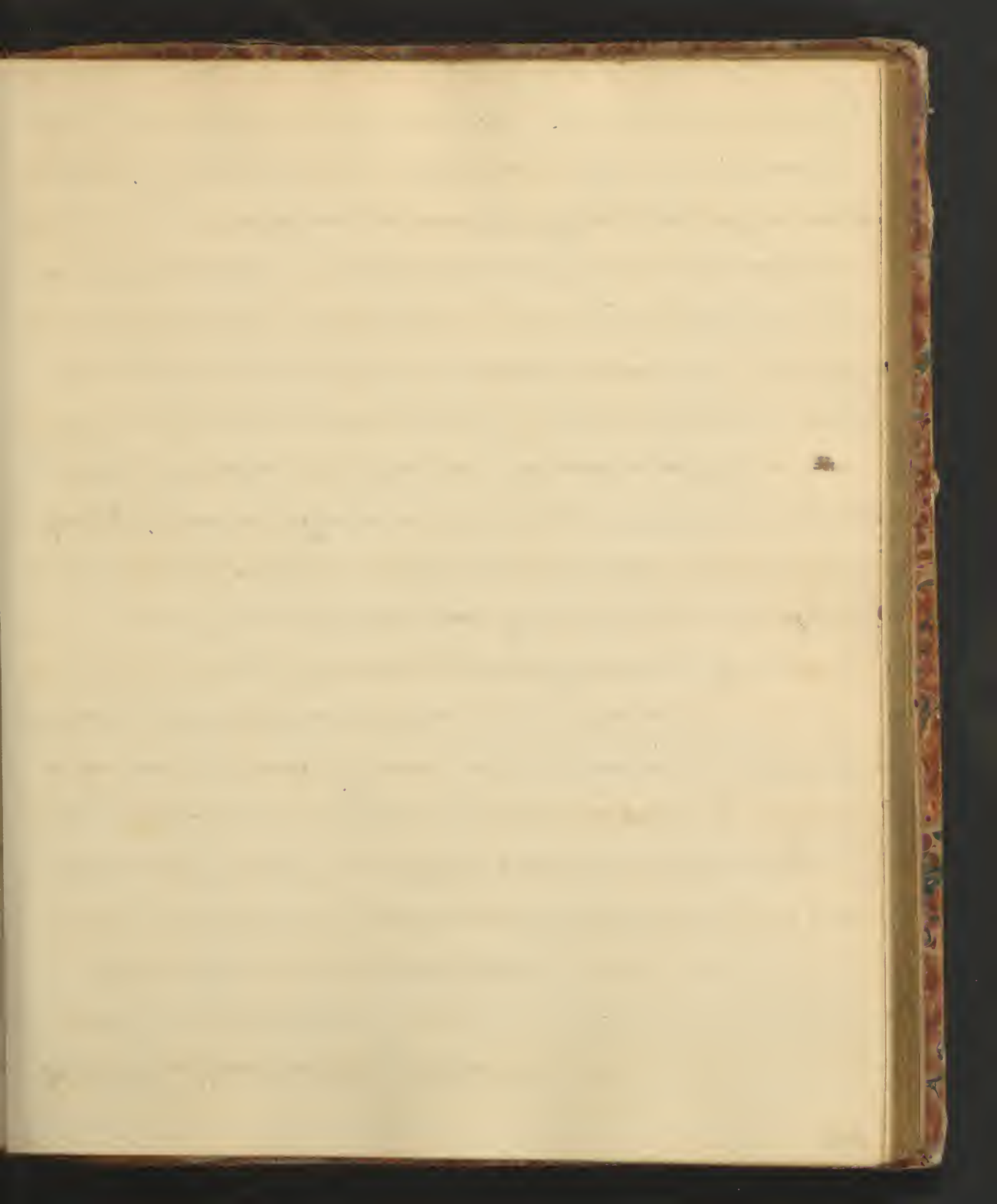
The Quat Phos is decomposed by 1/2 g. Phosphate of  
 Mercur with 1/2 g. Phosphate of Mercur, - & thus we get 2  
 g. Phosphoric Acid & 1/2 g. Phosphate of Mercur.  
 or Bismuth Subphosphate. -

By U.S. - Pass a stream of sublimed Phos.  
 thro a solution of Bismuth of Mercur. - Thus the  
 2 g. Phosphate combine with 2 g. Phos. & form  
 2 g. Phosphoric Acid & there remains 1/2 g.  
 subphos of Mercur or Bismuth.

There is also another process by fusing Phosphate  
 of Pot. without contact with the air, do de. -  
 Phosphoric or Phosphoric Acid exists in 2 forms.  
 The Medicine of the Antidote or Pure. -

The Phosphoric Acid is a transparent, colour-  
 less, volatile liquid, decomposed by light. - water contains  
 only 2 or 3 parts of acid acid. -

The Phosphoric Acid is much stronger, - is colourless, heavy  
 volatile, - sp. gr. 1.69 - water held coming & then leaving it



of 1 lb. quantity of Bro

1 lb. of Water

2 " Symplicament adeo

2 " Potitive of Bro, the precipitate one

State of Potiva. — But we have already

Monop. (p. 135) 2 lb. Symplicament adeo +

1 lb. Symplicament of Bro, make by

Symplicament adeo — hence we have

1 lb. Symplicament of Potiva. of Bro +

1 lb. of Water. — then by frequent wash

ing according to the latter part of the formula, the

Prot. becomes dry. — & we have the Symplicament

of the Potiva of Bro or Potiva & Bro.

It is indurated, indurated, of a rich deep blue colour,

from the nature of the water, & the heat, — in the

recal we get the substance. — It is decomposed by the

heat & the nature. — The medicine, it is sometimes used

as a kind of Alternative. — In Pharmacy, it is used

to form Symplicament of Mercury. — This was formerly

used in medicine, — but is now introduced, merely

because from it we obtain Symplicament, &c.



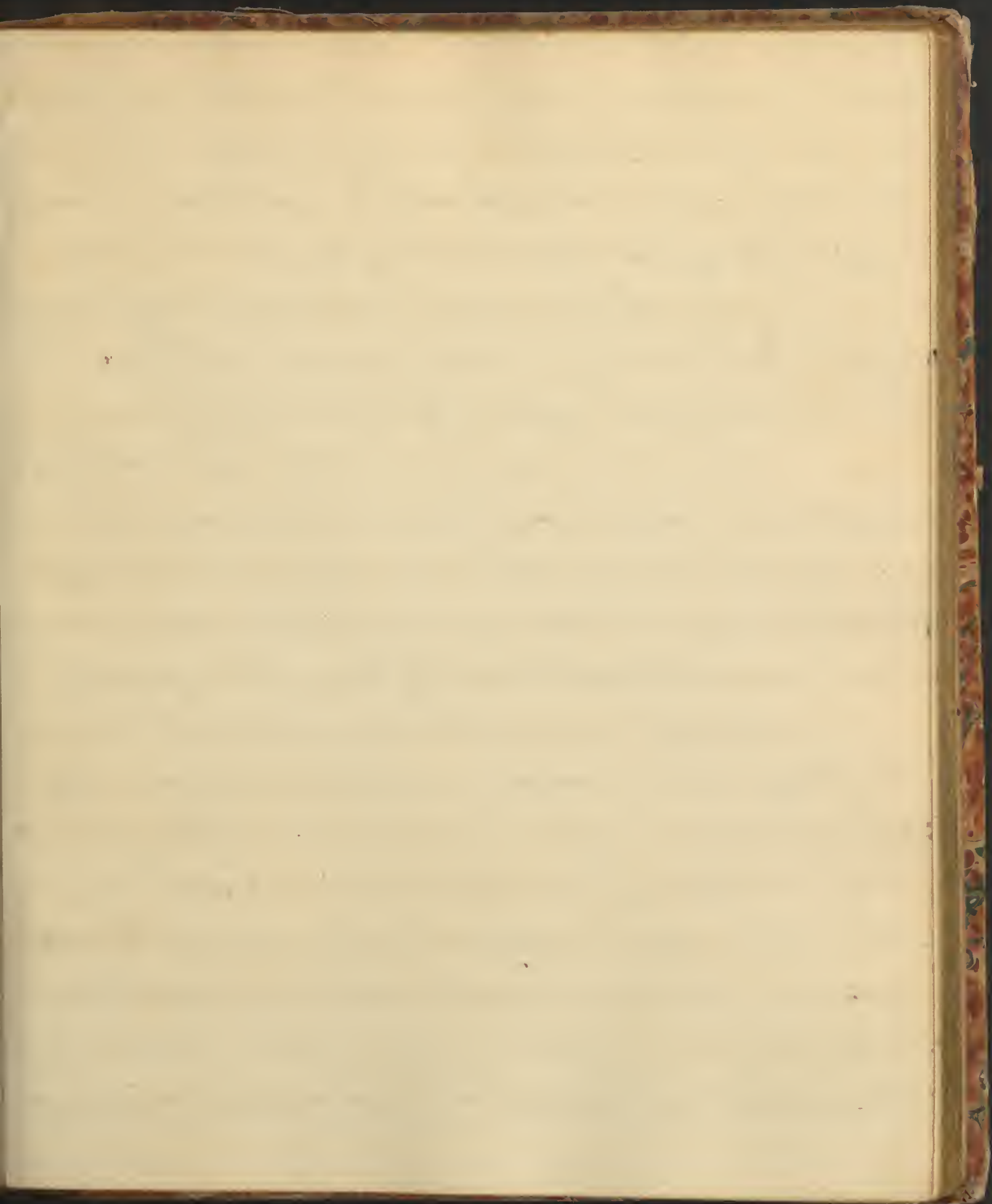
I'll find a way that I can find out the way  
that in the case of Mr. V. many the more - from the same

into Water gradually, - Evaporate, then precipitate  
 the oil - with a mixture of 2 parts Alcohol &  
 1 part Proto sulphate of Iron - then again wash  
 the precipitate dry it & put it into strong water.  
 The mixture is completely dissolved.

By mixing the 1st. Water of Potash with the 2nd. Water  
 and part of the 3rd. will be incorporated, the re-  
 sult is a Compound of Potash & solution of this precip.  
 by the sol. of mixture of Alumina - just as a precip.  
 of a Hydrargyrate of Pot. & Cal. of Pot. - The 4th. Water  
 good to know down the Alumina - then we have

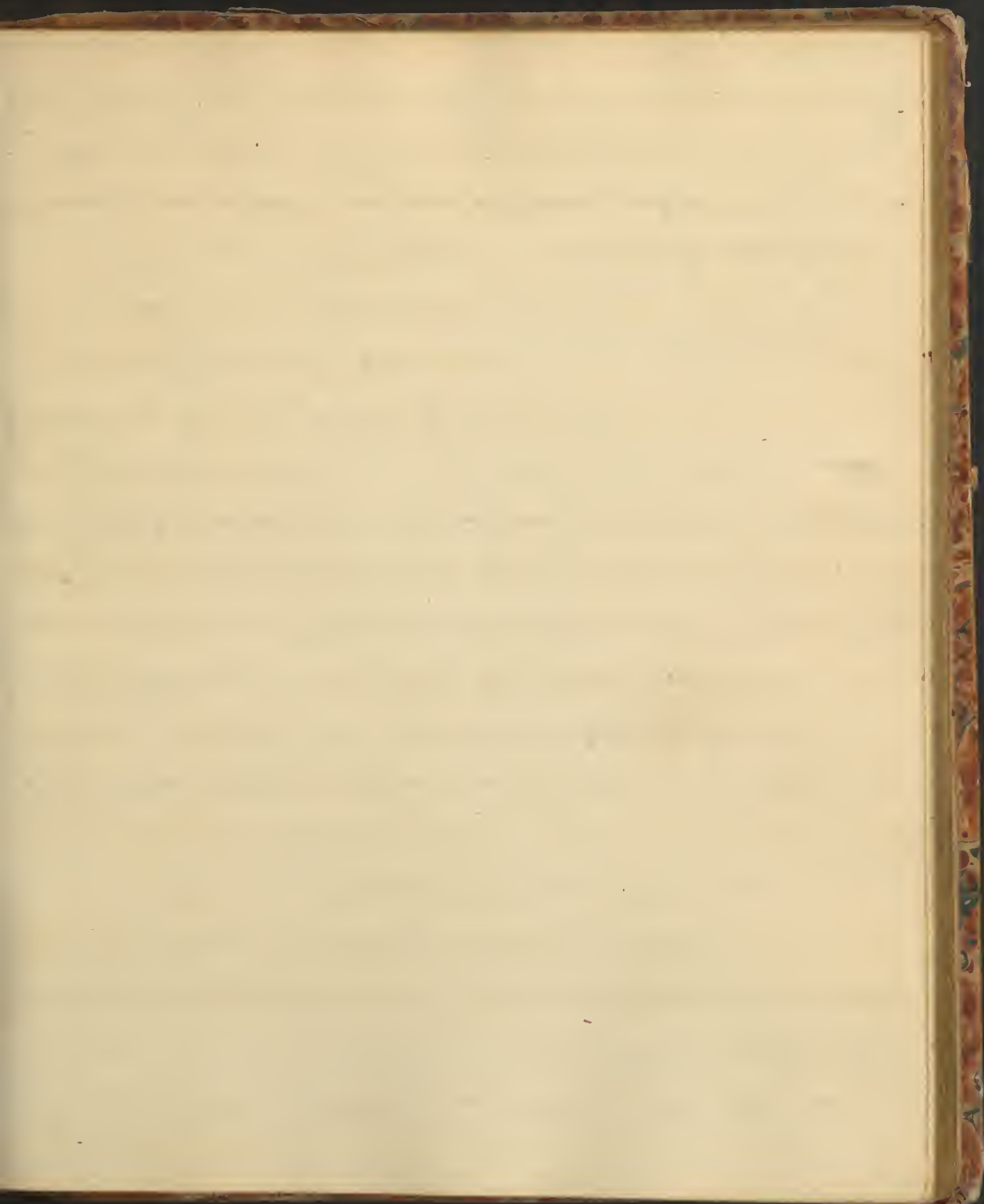
3 Grains. Sulphate of Potash and  
 3 " Hydrargyrate of Potash - now three  
 3 last equal will make 1 eq. Hydrargyrate of Iron.  
 1 " Water must not  
 2 eq. Hydrargyrate of Potash. Iron.  
 These 2 eq. Iron may be reduced into

2 eq. Hydrargyrate of Iron &  
 2 eq. Potash of Iron - which  
 will make the whole compound solution suitable



It is a neutral salt - crystallizes in 4 sided prisms  
 - of a lemon-yellow color - permanent in the air  
 - set in its own weight of water - it is a delicate  
 test for several of the metals - with iron it forms  
 a blue precip. - which is ferrous ferrocyanide  
 d with copper - a brown - ferrous ferrocyanide  
 when heated to  $212^{\circ}$  each again part with a 20g.  
 of water & becomes ferrous ferrocyanide  
 to form ferrous ferrocyanide - we shall get a  
 black substance if it will be changed to a cyanide  
 of potassium - this is at first a black mass, mixed  
 with carbon of iron - from which it must be  
 purified for use. —  
 ferrous ferrocyanide is used to obtain the dithionite  
 in heating it with sulphur - this is a good test for  
 ferr. iron - forming a blood-red precip. —  
 ferrous ferrocyanide of iron - or Prussian Blue  
 may be prepared by precipitation - but when prep.  
 in a large scale it contains Alumina, & is then ob-  
 tained by calcining dried blood or other animal matter  
 with heat till the it becomes black. then there it



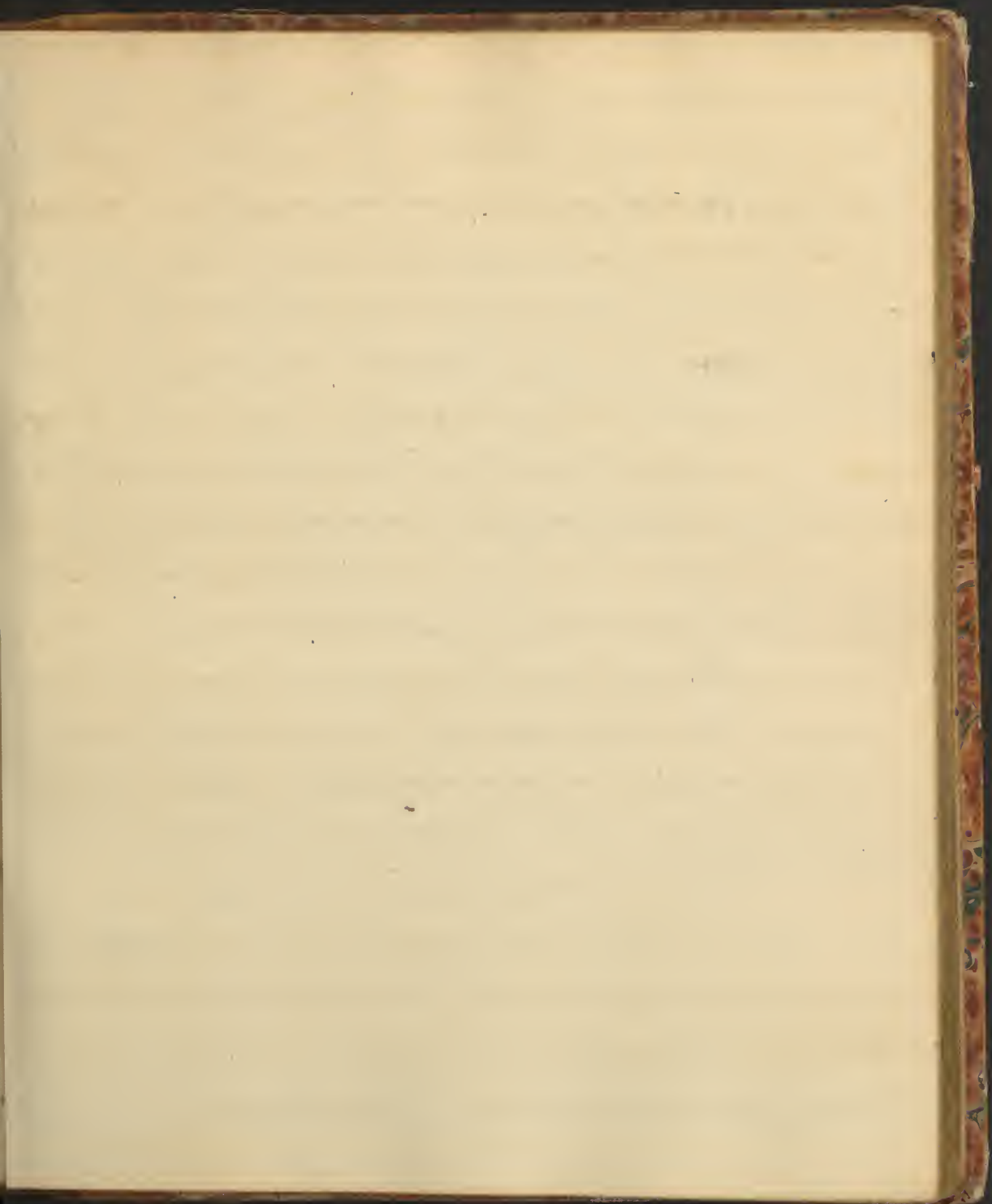


equivalent of water instead of 3, - that the remaining  
 2 Equiv. converted the Cyanuret of Iron into 2 Eq. Hy-  
 drocyanate of Potash, & express the composition thus:  
 2 Equiv. Hydrocyanate of Potash  
 1 Eq. Cyanuret of Iron  
 1 " Water.

Now there 3 Eq. of Cyanogen (contained in 2 Hydro-  
 cyan. 1 Eq.) united with the Iron, - with the Hydrocyan-  
 of the Hydrocyan. - considered the old formula to be  
 Hydrocyan. acid, or what is now called fer-  
 rocyanic acid, consisting of 2 Eq. Hydrocyanic acid -  
 acid =  $12 \times 2 = 24$  and 1 Eq. Cyanuret of Iron =  $(26 + 25) = 51$   
 making 108. - Hence we learn from the count-  
 urth of ferrocyanic acid to be

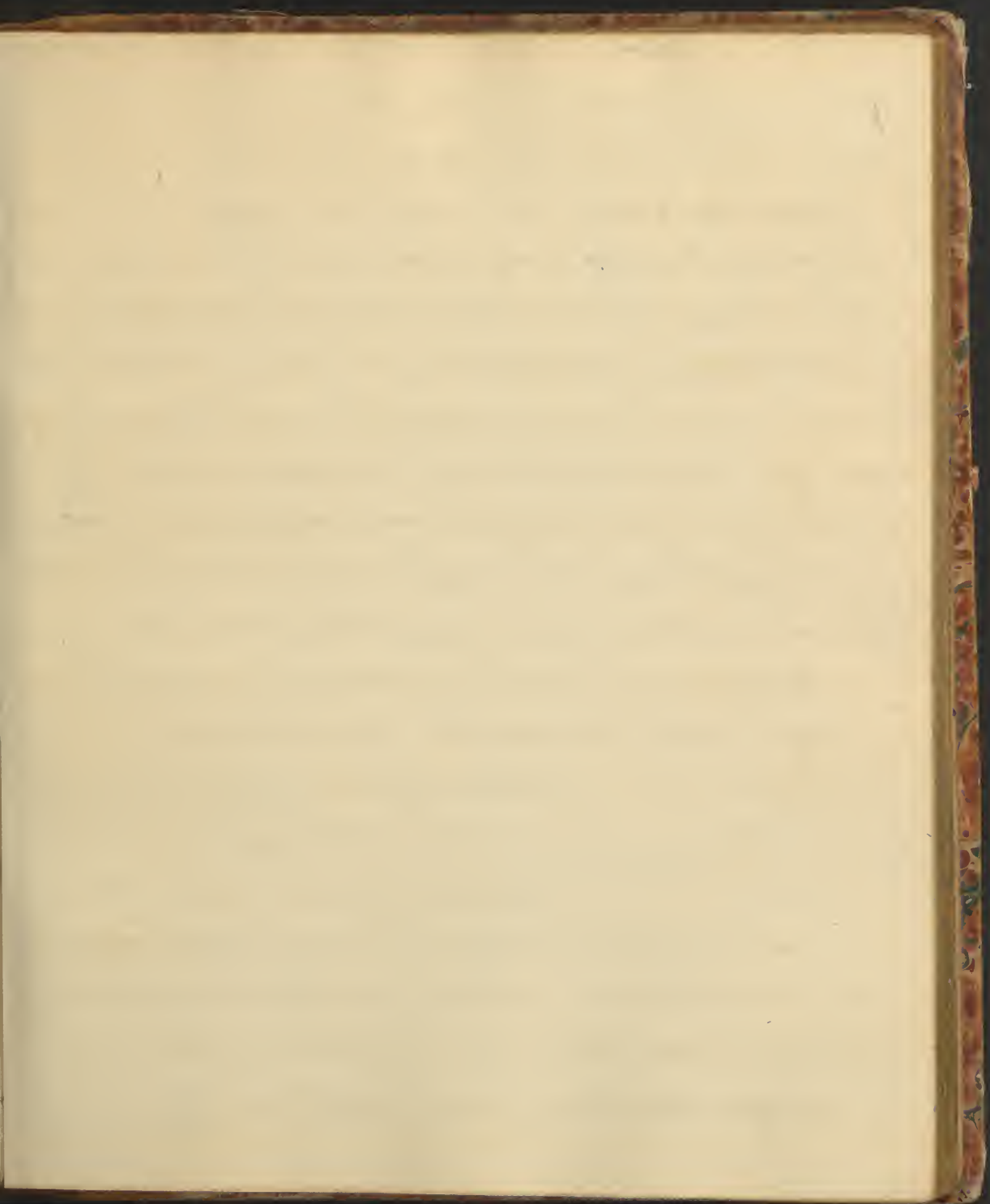
1 Equiv. of Iron  
 3 " " " Cyanogen  
 2 " " " Hydrocyanic acid - Hence  
 it appears that  
 of which there 2 form

ferrocyanic acid consists of Hydrocyanogen & Hydrocyan-  
 gen by referring to the upper formula, we perceive  
 that this form Cyanogen is a ferrocyanate of Pot-  
 consisting of 1 Eq. ferrocyanic acid & 2 Eq. of Potash.

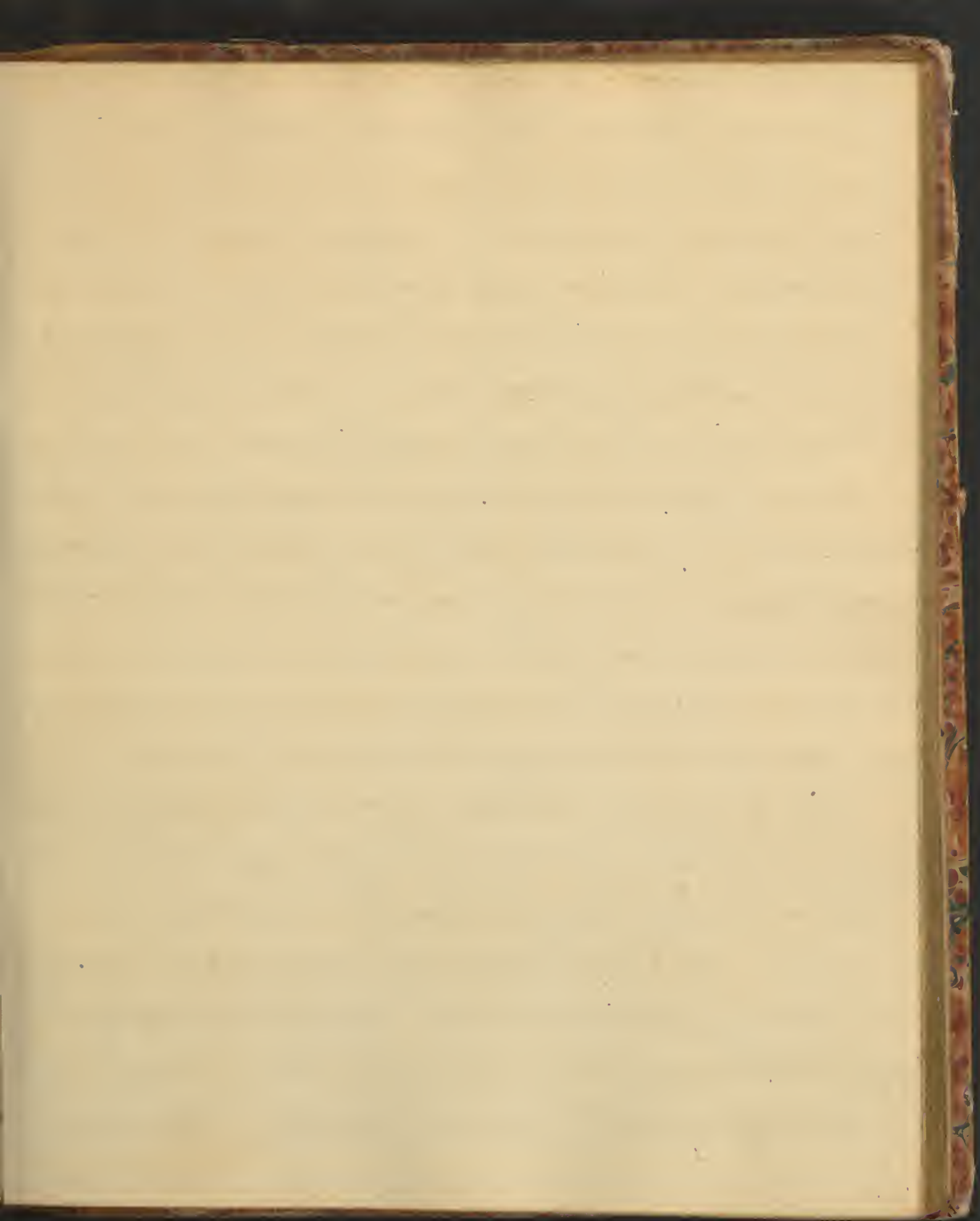






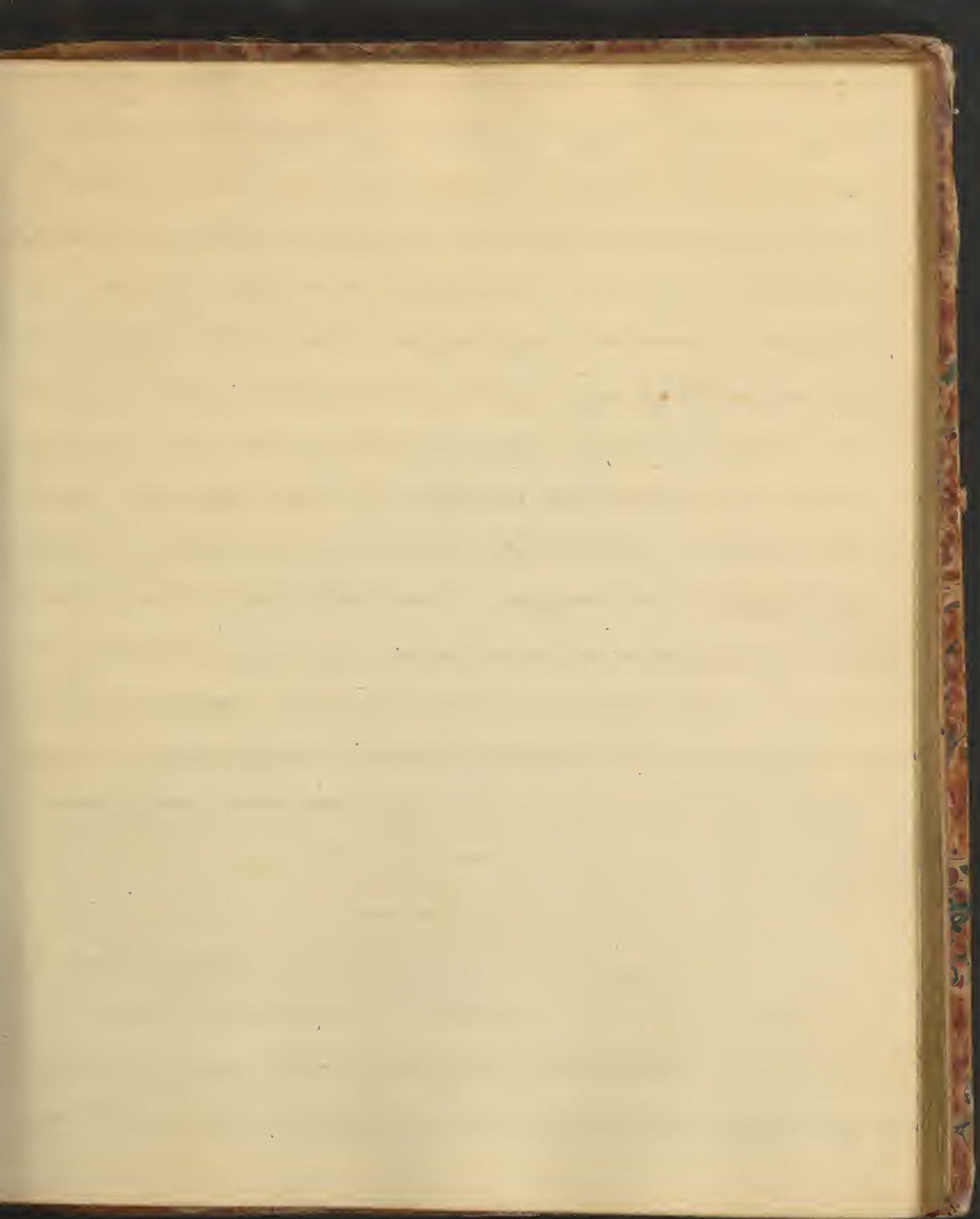






much more from the white matter, there is, than either the  
 pus or Gland, we perceive that there is no such mass of  
 matter as that, there is a double part, consisting of  
 substance of thick substance of the connective tissue,  
 sent to the various cylinders of the different processes,  
 we think the Gland is, the objection to the  
 use of Glass of dust of Iron, Calceps is, that even when  
 finely levigated, it is not very fine in matter & besides this  
 contained about 1/4 of an ounce - The objection to this  
 use of Cal - is that it is generally impure, not  
 easily acted upon by Distill. for - unless levigated & dis-  
 tracted - indicating it will take up about 6 parts - if even  
 pared, about 16 parts - dig extracted, about 75 parts -  
 The distill. use a proper filter - taking also a moderate  
 quantity of the medium length of boiling -  
 Farther Emulsion is a white, crystallized salt, having a  
 mawkish, insipid taste, - is set in 15 parts of cold  
 & 3 parts of boiling Water - By exposure to the air, the  
 crystals become white & opaque, from slight efflorescence.  
 The solution remains clear, - and is decomposed by  
 acids - acetic, - hydrochloric, & - Hydro-sulphuric -







When we give a favourable opinion of what we  
have seen the power of suggestion.

Evaporate to dryness - Dist. has 4 parts Bitar Pot.  
11.5 direct to live 1 part Earth. then with 2 parts Al-  
tar Pot. - then filter & evaporate - but this is not a good  
process. -

It is of an olive green colour - dissoluble - has a sweet  
but disagreeable taste - It is probably a double salt -  
It is a weak base & effervesces. Give 10 grs to ʒi. -  
Potestrate of Iron has been prepared by Dr. Me-  
ad as a substitute for the former as a chalybeate. It is a  
white substance & easily pulverised. -

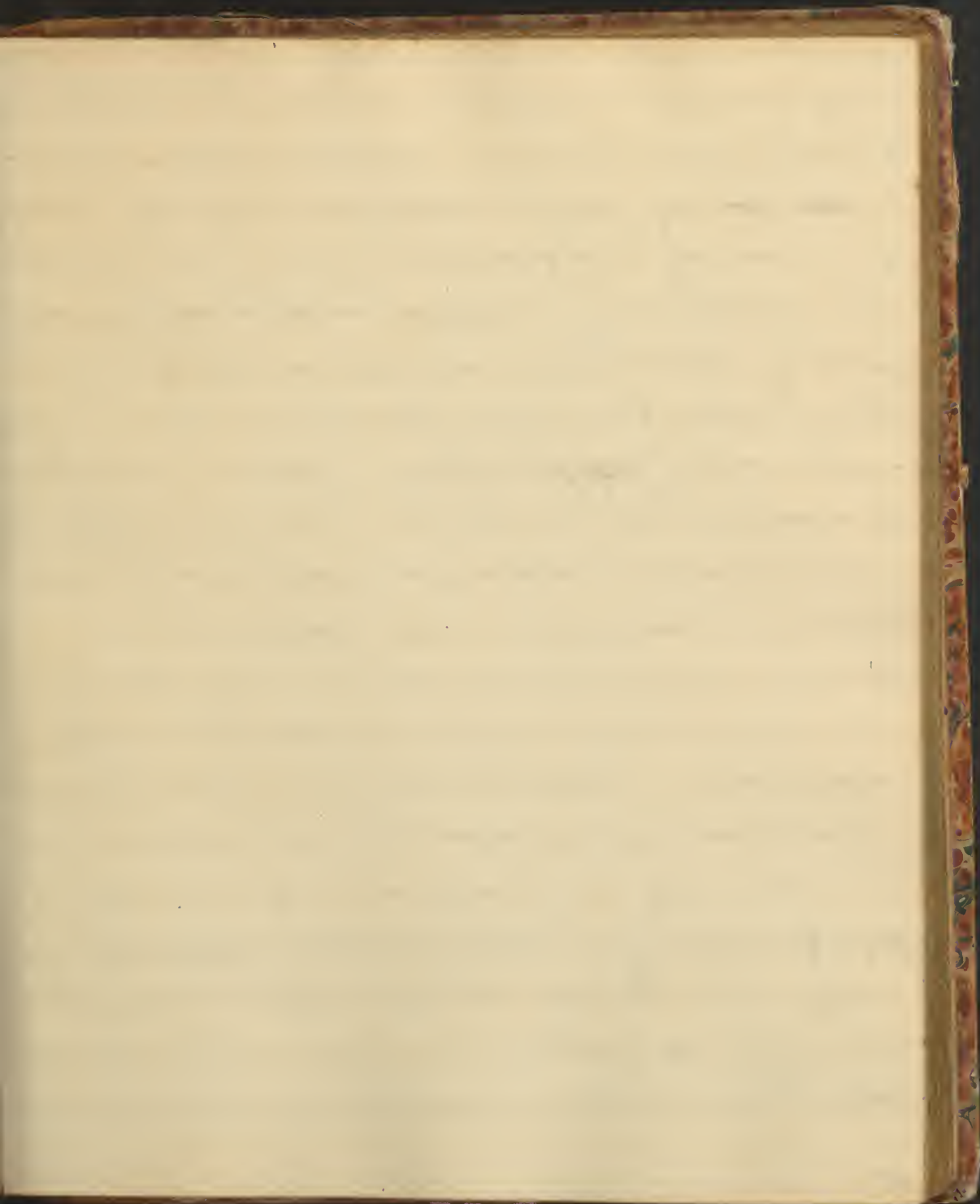
Official Description March 4<sup>th</sup> 1831 -  
Distar Potestrate is obtained in the Pharmacopoeia  
distillation Distillation (Don Distilled Aut.  
distillation of Potash Distill. ʒi. ʒi. ʒi.)

The power of evaporation upon which it is formed is to  
unite some form of a matter of that with a Bitar. of  
Potash - and in this are the Potash agrees - but  
the diversity of formulae arises from the diversity  
the different form of the potash are employed -  
The following table will show what form of potash



Diagnosis must be substituted for description  
though the name of the disease is

123.



...thus converting the distillate into a neutral substance; - it  
by saturating a hot solution of Carb. Pot. with Distill. Pot. -  
a neutral substance of Potash or volatile Distillate is formed

first is 31 or 32. - as Cathartes 33 to 34. -

white, roundly crystalline with sharp. - when in an open  
vessel it is a hyaline (pure) substance. - in drying, it is a fa-  
ct is a Cathartes, Distillate of Sulfuric Acid. - the large

area it contains also 18 grains of water - 9 making 189.  
2 grains of Sulfuric Acid, & 1 grain of Potash, & when crystal-  
lized of Distillate, no an impurity. - it is composed of

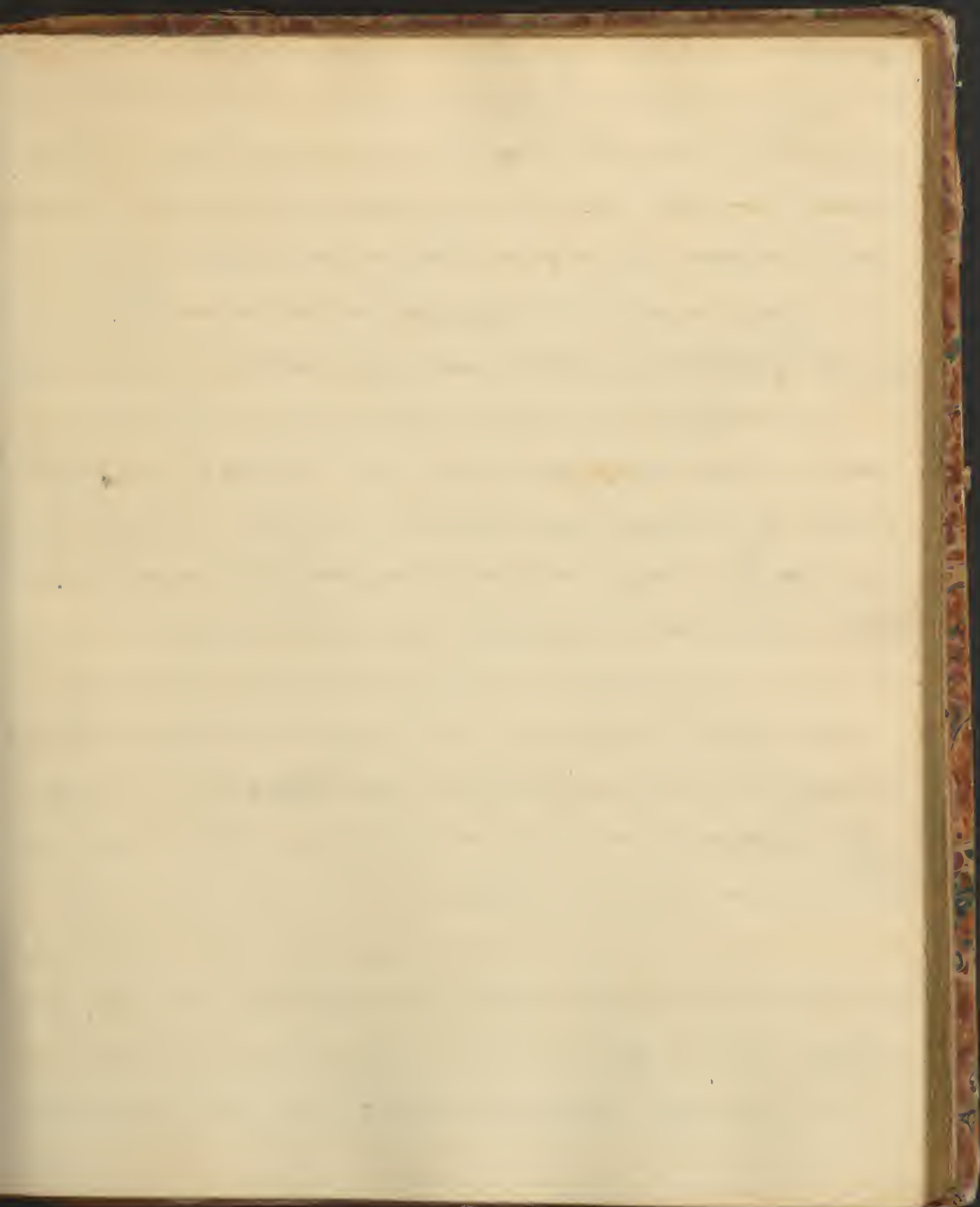
Distillate generally contains 5 or 6 parts, sometimes more  
than the correct volatile amount of Distillate. - when dry  
it is with the absence of water it becomes much more sol-

uble in water, - indeed, in cold. - when con-  
sisting of hot water, - indeed, in cold. - when con-  
sisting of hot water, - indeed, in cold. - when con-

it is a white, crystalline salt, slightly acid, - very  
it is placed in the heat that heat of the rectifier.

Distillate (Subl.) - Sublimed Pot. (Subl.) & Distillate (Subl.)  
very to become clear white. - it is off in use than  
the white crystals which are exposed to the air for a few  
or being another, & the clear solution upon cooling deposes



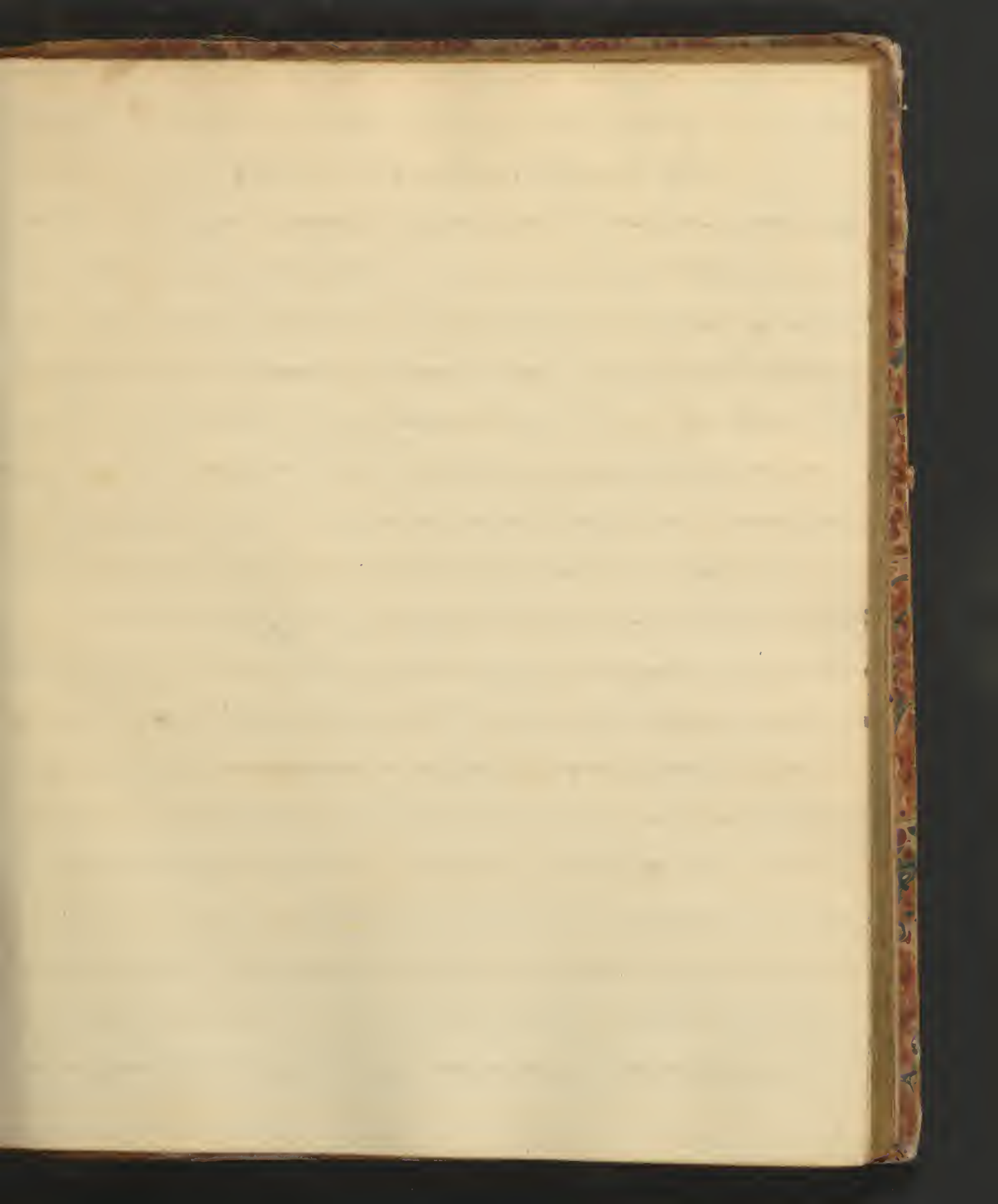


ingredient of what is termed Soda powder. —  
 Its ultimate composition is 2 grains Hydrog. = 2 - 4 grains  
 Can 24 - 45 grains by 60 taken together, of one oz. of Hydrog.  
 = 9 grains by 75. —

There are a number of Hydrog. - but in three we  
 find these only, which are used in manufacturing: 2  
 Hydrog. of Potash, - 2 grains of Pot. Soda or Potash  
 Salt, - 2 grains of Pot. & Iron, - 2 grains of Iron.  
 The 2 grains of Pot. are Hydrog. & Potash of Pot.

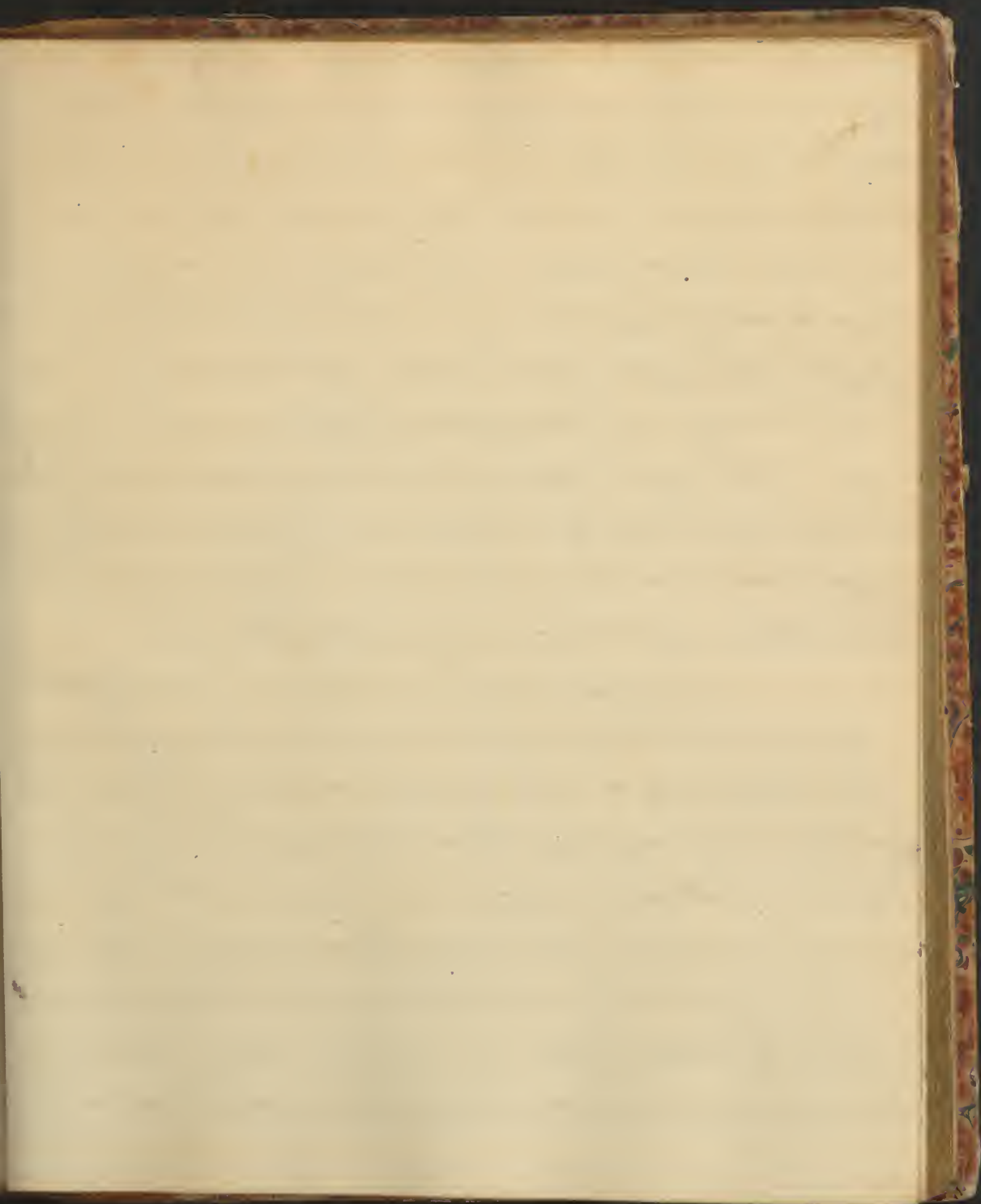
We shall first consider the Potash, - or as it is pro-  
 duced by carbon, Chloride of Carbon & Iron of Carbon.  
 This has been already mentioned (p. 115) as the source  
 of Potash, ideal. - Its crude state comes direct  
 from the furnace on a large scale in Montpelier in  
 France, & is produced upon the property of Croix  
 Salt, being mixed in hot steam in Cold Water. —

The Mount Pel. is pulverized, & dissolved in water in copious  
 vessels here it is saturated; - it is then transferred to earth-  
 en pans, where it cools & deposits a crystalline layer. - This  
 is mixed with argillaceous matter, & the mixture  
 is evaporated to a bolling. - The clay mixed with the



Acid our part of Nitrate Br. is about 10 parts of Water;  
 than add Carb. Lime sufficient for saturation, two par-  
 tials a precip. of substance of Lime; - with Acid is present  
 & there remains in solution a neutral substance of Potash.  
 To this add, then dissolved by double decantation we have  
 Ammon. the dark line. - Wash the dark line & set upon  
 with sulph. Acid diluted with 10 or 15 parts Water, & then  
 we have an acid. sulph. line, which dark Acid remains  
 in solution; - this must be evaporated dry & recovered  
 & is off. in Br. But 11.5. Phos. - by 11.5. - placed in (water)  
 12. But Phos. line as much dark Acid is obtained as  
 by the Br. - This is a solid crystalline matter,  
 not in Water, & to a certain extent in Alcohol; - has a  
 strong acid taste. - It stops is usually in the form of  
 powder, when exposed to heat, is changed & decomposed  
 & by distillation appears by platina Acid. - & solution  
 of it communicates between the 2 bases, 88. & Potash.  
 with a solution of Acid it forms no precip. - while with  
 a sol. of Pot. it forms a precip. of Nitrate Pot.  
 Nitrate Acid is used in medicine for forming re-  
 sistent druggs by dissolving druggs - it is an





may be prepared also as tart. lime is - then the same

Cup. acid. Prepar. (11.5) - It is used externally as a

gentle detergent & escharotic. -

The second acid is off in Wat. bat. - formed by oxidizing

ing benzoic in acid. acid. - It is in dark green crystals -

acidic of the energy - is off. too. tart. acid. - formed

by adding a sat. of acid. off to a sat. of tartaric acid of

More. - Chrysalis - bicarbonate - it is the preparation of

more. present in the sugar's acid. -

Early - fourth section March 1st 1834 -

Tartaric acid is derived from a peculiar vegetable

substance called Tartar, which is properly a compound

of tartaric acid & Potash. - It exists in the sap of the

fruit, & hence is apt to be abstracted from numerous

wine & fermented on the inside of the cask, where it is

obtained for commerce. - That from the Rhine is called

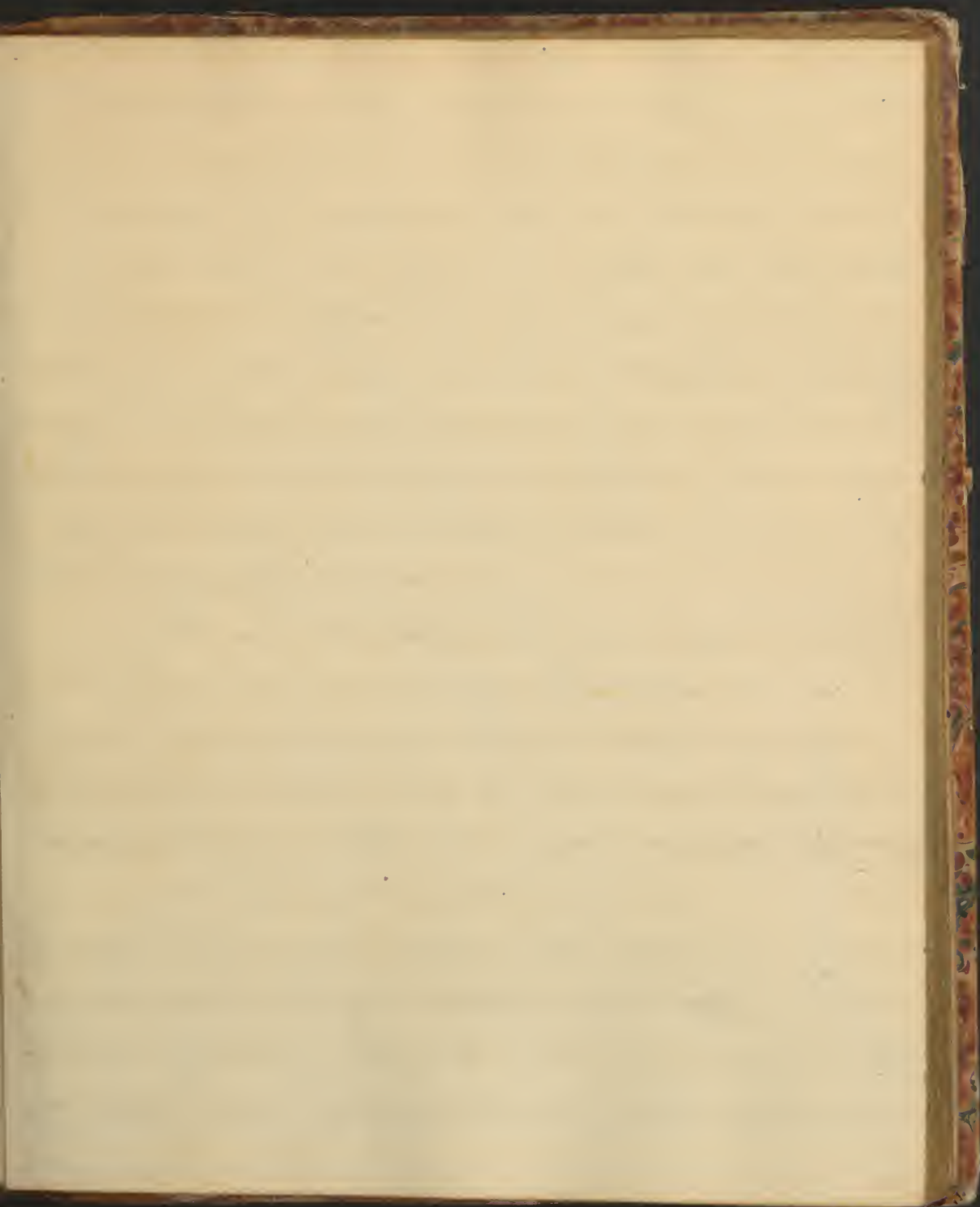
Red tartar - from Rhine wine, White Tartar - Rhine

Tartar is called sugar - When purified it becomes cream

or crystals of tartar, named by chemists Bitartrate of Potash

This then is the source of tartaric acid, & in order

to liberate it from the Bitartrate, process as follows -

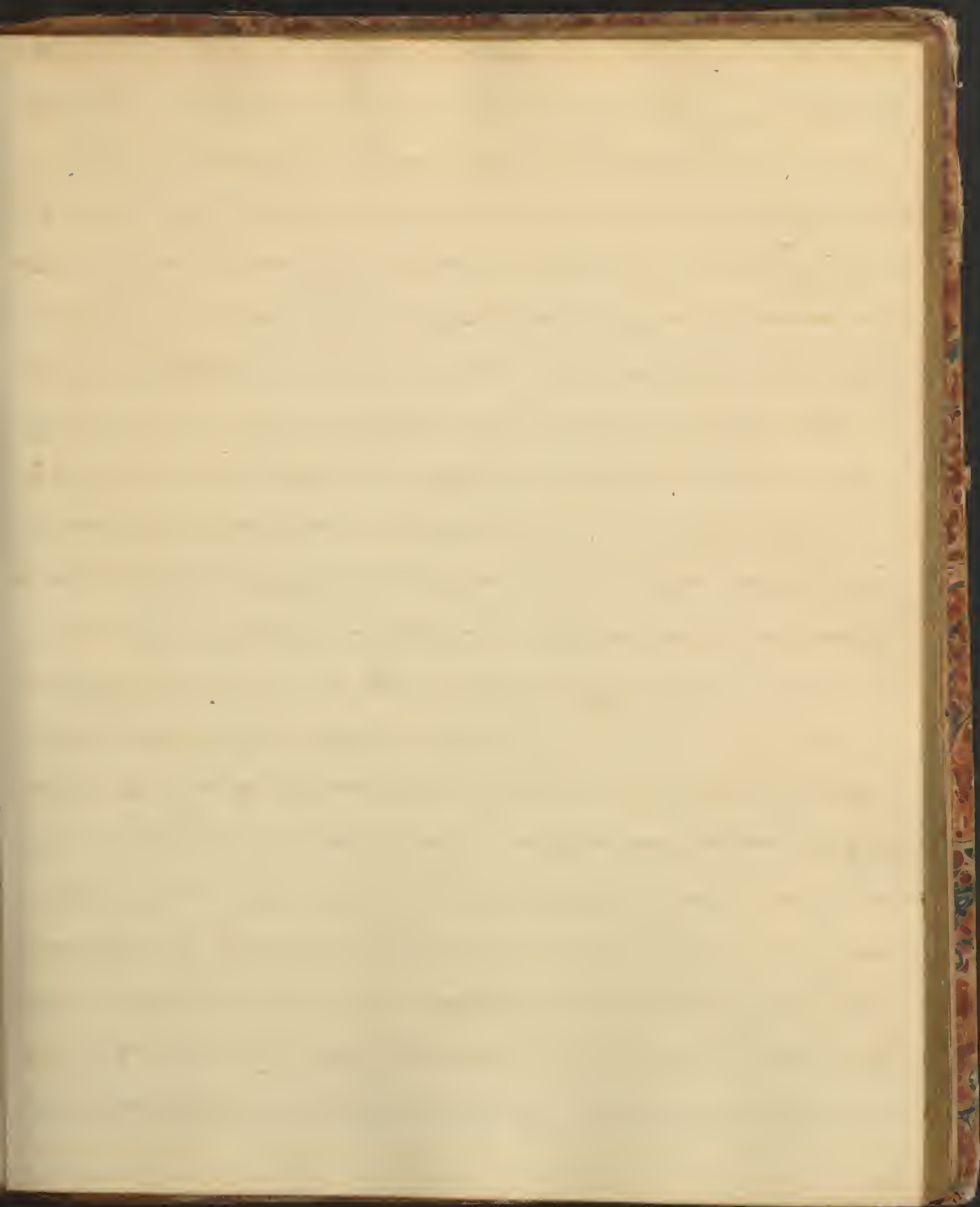


this Relation as it will take up at a boiling temperature  
 if some Sulfur is extract - liquor Plum. Sulfur. (11.5)  
 dia Water, dig. Plum. Sulfur. (11.5) is found  
 by adding 3i Sulfur is 3lb to 1lb. 2oz. Water - this has  
 over makes a very weak mixture -  
 acetate of lime - is off. w. l. s. - since acetat. - form  
 by acute decomposition between 2 solutions of sulphate  
 of lime & acet. acid - it is extract. sol. in Al. & the solu-  
 tion is off. in hot. Water - which is off. in hot. Water - Al.  
 is generally, empty of oxygen, as one atmosphere of  
 oxygen - had hydrogen -  
 there are 2 acetates of copper used in medicine. 1.  
 Impure Acetate of Copper or Verdigris - 2. Pure Acetate  
 acetate of Copper or Chrysalis of Venus. - the first is  
 prepared exclusively for Commerce in France, by that  
 using plates of copper with the refuse of the paper that  
 leaving them to remain for several weeks - then it is scraped  
 off - packed in bags - dried in the sun & exported - then  
 pure & good, it should have a bluish green colour, free  
 from black or white spots - should not deliquesce, - or  
 have a saline taste - it is off. Austria. Acet. (11.5) - it





dictate of time - is off. only in But then - from a dictum  
 formed by nature - that it is to 6 times its weight of water  
 Acid. - 10 to 12 times - more 10 to 25 times - that water  
 has acid of off. structure of the water. - which from  
 acid - made by putting up acid with the substance of  
 from adding true Acetic spirit. - & water. From  
 acid. even - the - made by putting the former with  
 the material of first spirit. - they are both used  
 as they both. - & are 10 to 12. -  
 of acid. - the acid of 10. (11.5) is placed in the  
 what. Acid of 11.5 - the British water found by 11.5  
 being East. Acid in distilled vinegar - in a large quantity  
 it is made by adding dilutions in distilling every 100  
 it is a white salt - crystallizable - has a sweet styptic  
 taste - effervesces slightly when exposed to the air - etc.  
 in pure form. - but with common H. forms an opaque  
 solution on account of the tart. acid formed with water.  
 Acid. - It is used internally for urinary and a venereal  
 In the use of Acid is from 10 to 12 every 2 or 3 hours.  
 for forming a phlegm - a solution is made of 3 to 4 grains or  
 for of water. - When as much dilution is added to



We must proceed to the details with the preliminary remark, that all the acetates yield a small percentage of water when such acid is poured on them. -

The acetate of strychnine is off. white the strychnine itself is a very insignificant salt - with a sharp pungent taste is soluble in 80 or 90 weight of water. - It is a fluorescent substance.

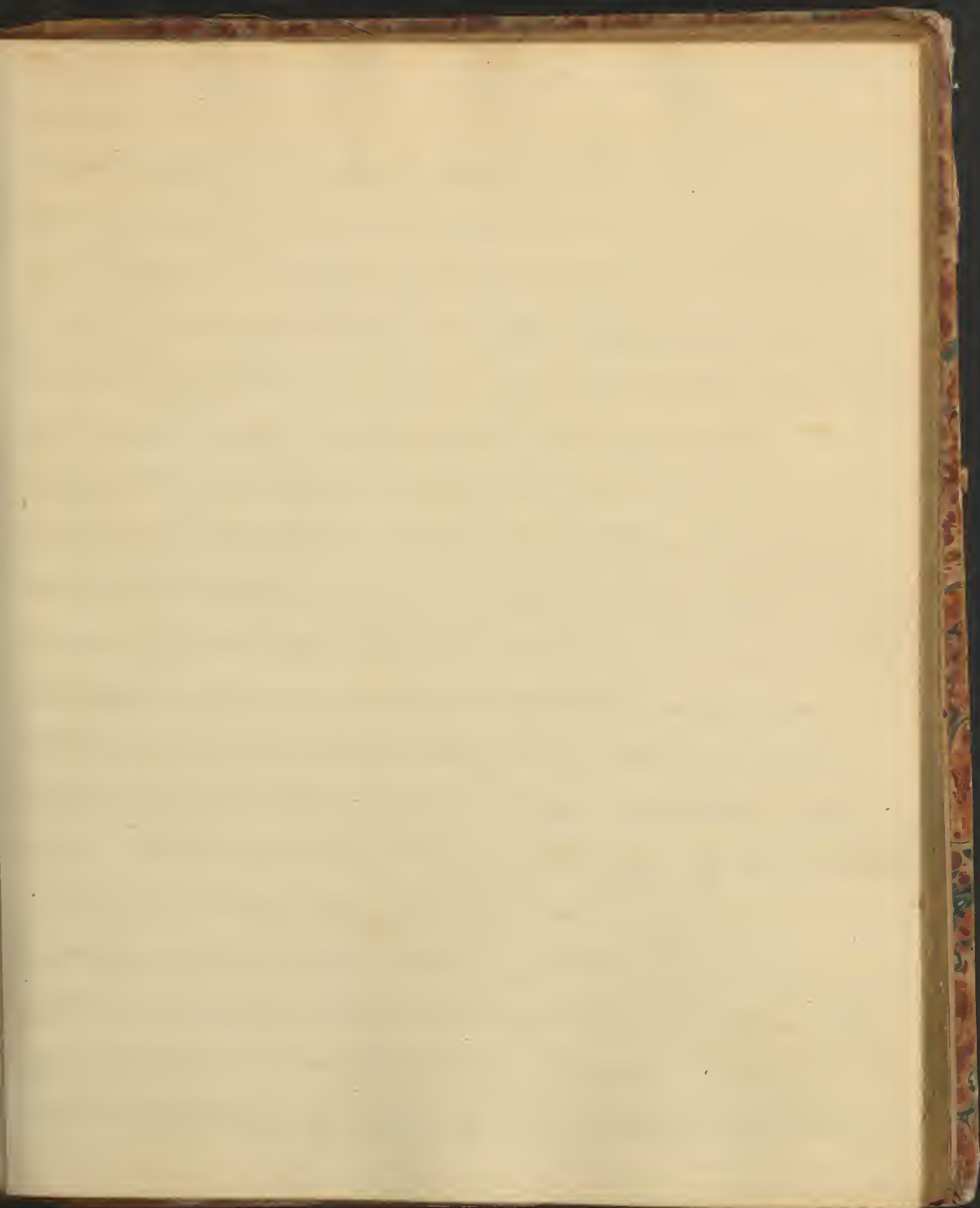
Cathartics - Dose 10 grs to 3i or ʒij. -

Structure of water is off. in Cath. & Al. S. Phos. Sud. idob. formic (Hy. But.) by saturating distilled vinegar with Carbonic Acid - A better method is from the same reaction position of sulph. Acid & dist. vinegar. - This is a white salt - has a sharp bitter taste - is not decomposed either the former - it used as preceding dose ʒiv. ʒiv. -

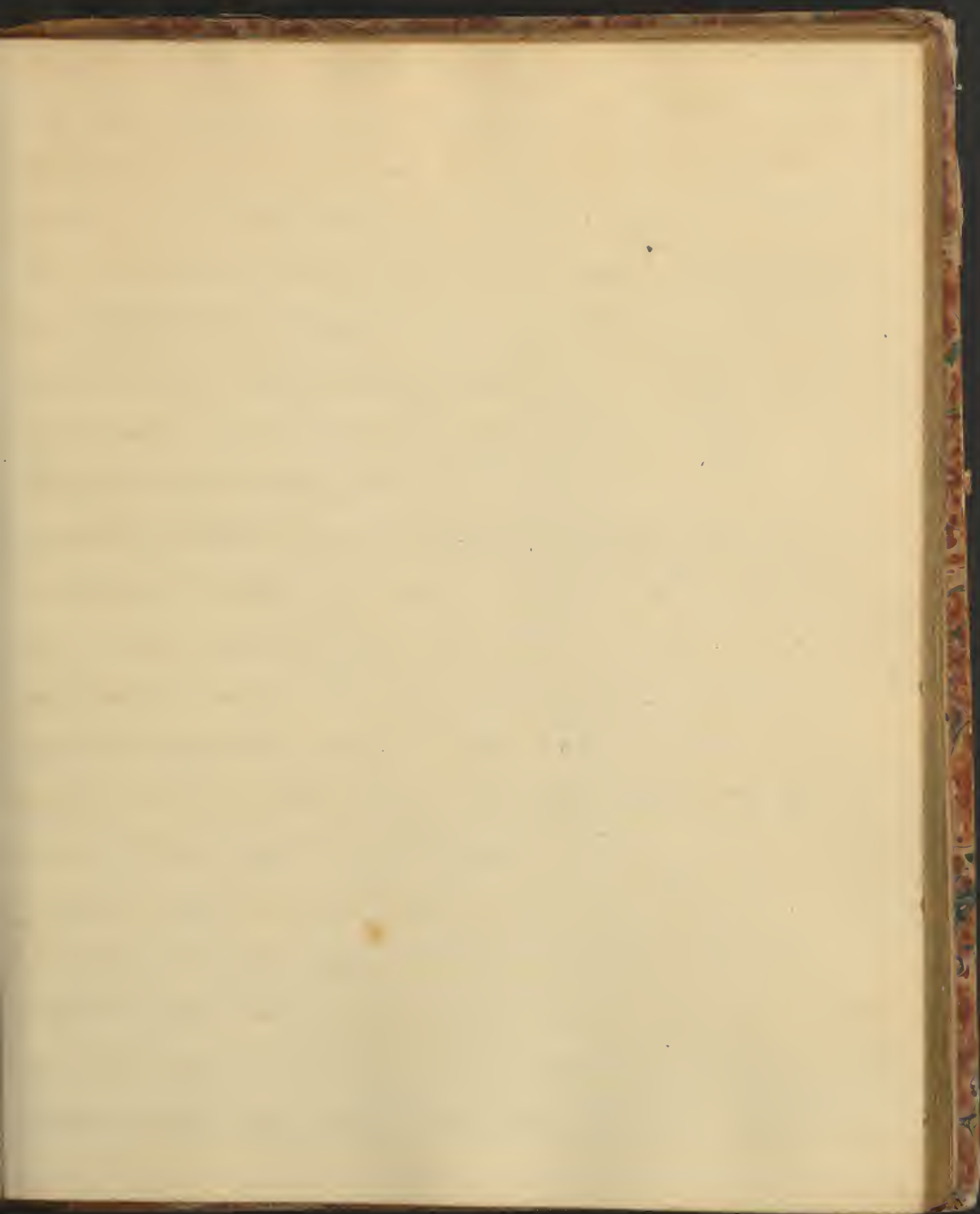
Acetate of quinine - liquor Ammon. Acet. / (U.S.). - By adding bar. acid. to the acid. Acid. - Is a transparent colorless liquid - has a saline taste - was formerly called Spirit of Wine - is dissolved in ether - does not dissolve in potash solution or Soda Ash even 3 or 4 hours. -

Acetate of lime is not off. formed by saturating Hydroxydous Acid with Ethac.







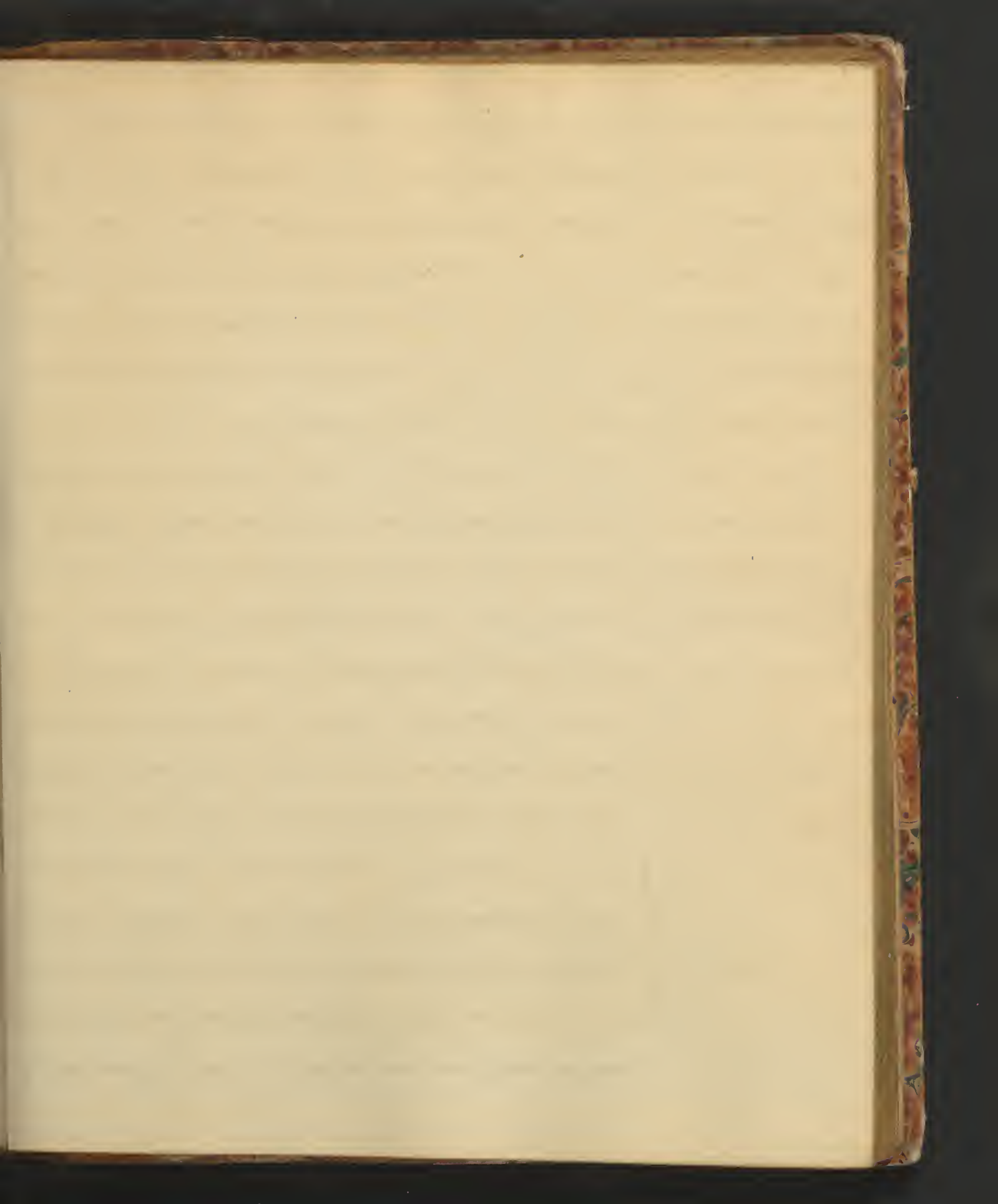


present in the acet. Acid formula, than in alcohol. -  
 when from the composition of the two, - it appears that  
 carbon & hydrogen must be taken from the acid to form  
 acet. acid. - the latter may escape in the form of  
 carbene acid, - but it yet remains a mystery in what  
 manner the hydrogen is diminished. -  
 Vinegar is a dilute solution of acetic acid, containing  
 also some alcohol, tartar, & other impurities, - is of a red-  
 dish yellow colour, - an acid taste & smell, - sp. gr. variable  
 but seldom exceeds 1.059. - it is ag. - a solution of acetan-  
 chloride (in 5) - the latter is formed by distilling a  
 solution of vinegar, during which process the first part is  
 rejected, the rest is retained, & the remaining of rejecti-  
 the rectify - then pure it is colourless, having an acid  
 taste & smell, - sp. gr. 1.057 to 1.059, - is weaker, & less im-  
 pure than common vinegar. - it is weaker, because the  
 boils at a lower temperature than strong <sup>vinegar</sup> acetic acid,  
 hence a larger proportion of water will come over than  
 of the vinegar, & of course render it weaker. -  
 Strong acetic acid, is obtained from an acetate  
 by the action of sulph. acid. - The H. S. formula is by









fixed with some substance, as in the case of the

are analogous to the following.

It is compared, as by the inner diagram

of 3 eq.  $\log a$ , - 2 of  $\log b$ , & 1 of  $\log c$

making it equivalent 23.

or it may be said to consist of 2 eq.

of  $\log a$  and 1 of  $\log b$ , & 1 of  $\log c$ .

rounded into one set,  $\log a = 23$ .

We have already stated (page 97) that the quantity

of sugar which disappears in the process of fermentation

is just equal in weight to the carbonic acid formed.

To prove this we must recollect that sugar consists of

4 eq.  $\log a$ , - 2 of  $\log b$ , & 1 of  $\log c$ .

log. of sugar in the matter of investigation, they will

be represented as follows.

log. of sugar in the matter of investigation, they will

be represented as follows.



It is not yet agreed among the friends  
of the cause of the poor in England  
and the friends of the poor in France —

but all of them may be said to be united after the  
variously flavored & colored. - These medicinal  
it forms the most spirit, which yet contains that  
to purify it from this. Any part of the Chlorine of the  
them must be used, - it thus becomes a substitute for  
this a fruit, there are a great deal of other, strong, burning  
note. - The most of it is 1791. In the state of  
vapour, sp. gr. is 1.613. - It has never been condensed, is  
very elastic, - when its sp. gr. is 820 it turns at 176°  
It burns with a blue luminous flame, producing the  
Chlorine, & also with a blue flame, producing the  
Carbonic Acid, with also a blue flame, producing the  
forming the "diamond without flame". (M. J. Berthollet)  
It is off in all that - Alcohol & Aqueous (N. S.) & A  
is used chiefly as a medicine, for fluxions de - it was  
dissolved in water, & thereby forms a medicinal effluvia,  
with this we form a medicinal, - improperly called, but  
the fluency. - The water in the distillation of the  
which hence is employed to purify these from their  
Carburety. - It is decomposed by Sulphuric Acid, but  
are other acids except Phosphoric, & the metallic are  
soluble in it. - It also is almost in the state of con-



[illegible]



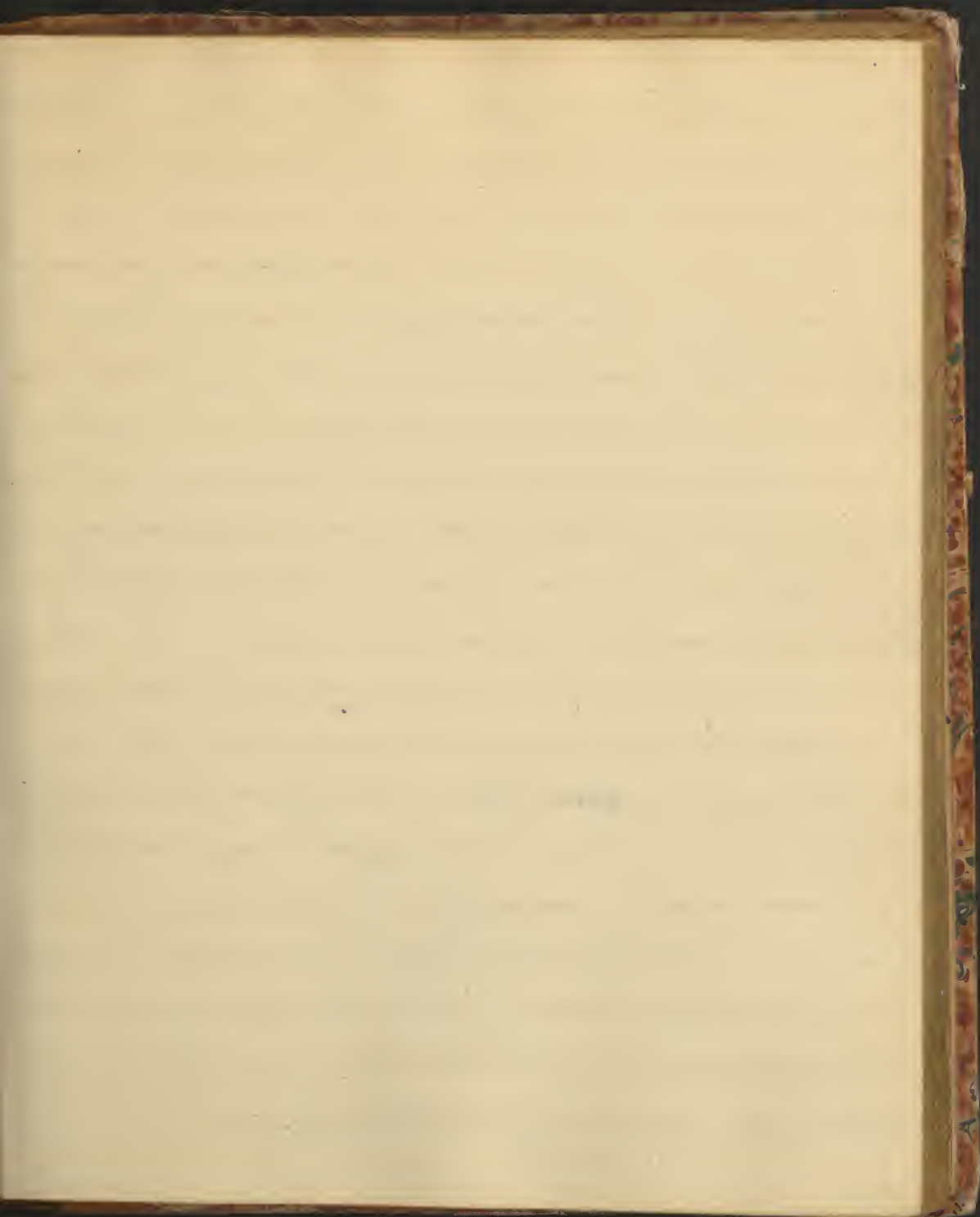
Effect of an active vegetation

3. contains those in which the Oxygen present is more  
than sufficient to form water with the Hydrogen  
as contained in it - called *hydrog. acids* - and are  
decomposable for their power of operating on the  
economy - called *hydrog. acids* - or *hydrog. acids*.  
to these, may also be added a 3<sup>d</sup> or *hydrog. acids*  
class which receives the name of *hydrog. acids* - as  
contains *hydrog. acids* - *hydrog. acids* - *hydrog. acids* -  
of the first class or *hydrog. acids* - *hydrog. acids* -  
Sugar is white, - has a prismatic taste, - crystallizes  
in Mr. D. - solution in water forms syrup. - the  
residue in a liquid form, having an empyreumatic  
Hawer is termed - *hydrog. acids* - *hydrog. acids*  
Sugar is composed of Hydrogen - Carbon - Oxygen - each  
it is 100 in the Hydro - Saccharum (100) Sugar  
The two starch are the first constituents of flour, they  
are separated from each other by subjecting flour to a  
stream of water, which washes away the starch, while  
the Gluten remains behind. —

Write me quick - I am dying  
Sweet, I am - I am dying

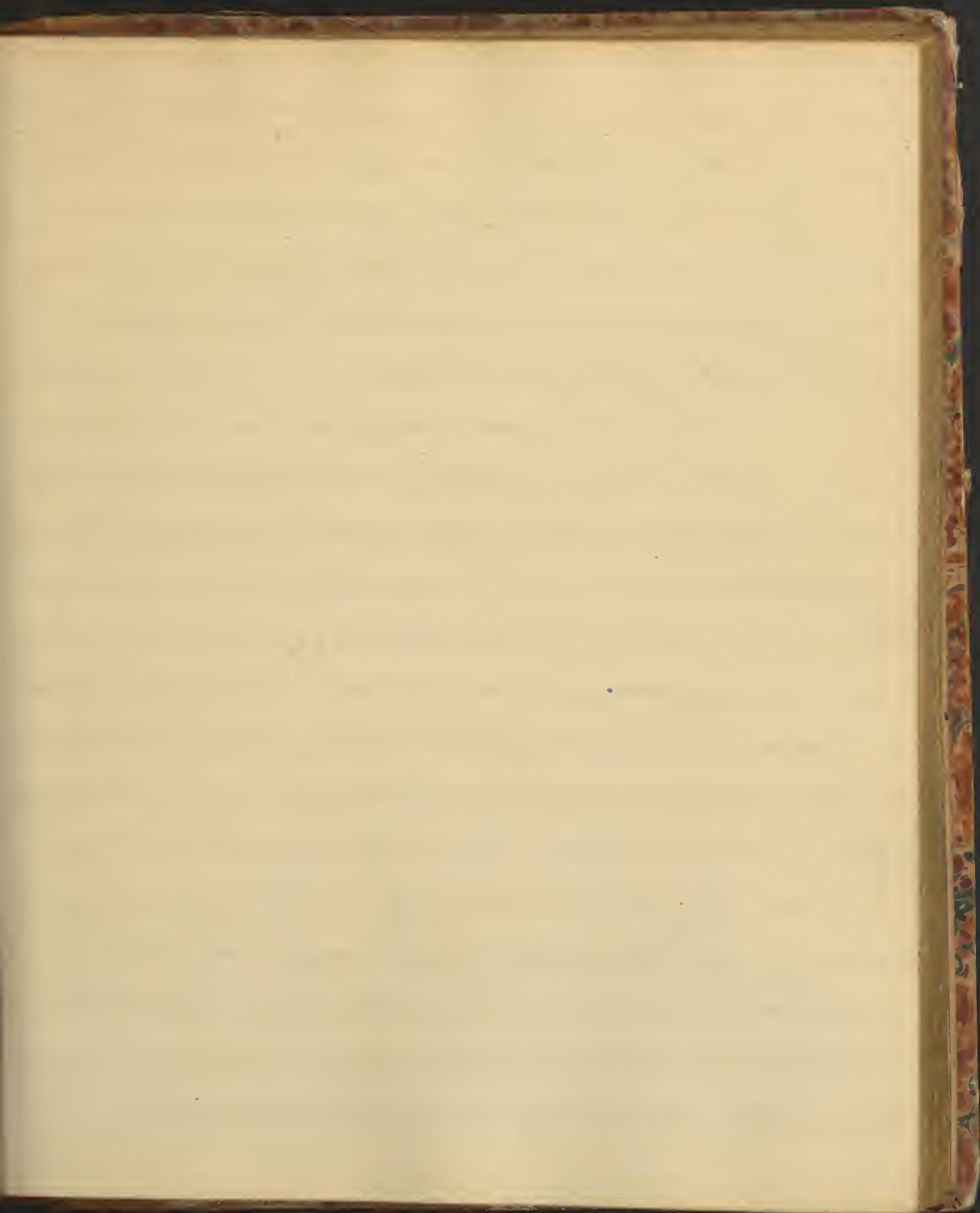
These three substances are principally, the ultimate, the  
 st of veg. matter. - sometimes however it contains, be-  
 sides these, nitrogen. - Some portion of cheap - dup.  
 The highly acid are present in some veg. matter. -  
 Effluviae constituents are peculiar compounds, far  
 remote from the vitality of the plants, - or derived im-  
 mediately from veg. matter, as, decaying, - which is easily  
 an acid. - Various plants have been received, for  
 classifying the veg. matter - but the last is that of  
 character, by which distinguishing element, the clas-  
 sifications founded upon the relative proportions,  
 contained, of these ultimate, constituents - on which the  
 chemical dissimilar qualities of veg. substances depend.  
 There are 2 classes. - 1. Containing those substances, which  
 they are present in the exact proportions for form-  
 ing matter - as sugar, gluten, starch, gum, &c. in the  
 which are called heterogeneous substances, - a name  
 expressing their inactivity, or equality of composition. -  
 2. Containing those in which the  $H_2O$  is more than suf-  
 ficient to form matter with the veg. product - as oils, oleous  
 de. - these are called heterogeneous substances. -





Ortho doct. Lecture Feb. 27<sup>th</sup> 1834.

What appears of the influence of man-made factors  
 we next take the subject of Organic Chemistry, by  
 which we mean the chemistry of substances derived from  
 organic bodies. - Then we consider of Org. bodies, de-  
 rived from the vegetable & animal Kingdom, - hence  
 Org. Chemistry is divided into Vegetable & Animal Chem-  
 istry. Chem. is comparatively unimportant &  
 would occupy time which might be better employed  
 in the former of these, considering we shall find it  
 Vegetable Chemistry, may be considered in 2 points  
 of view, as to the matter contained in it - 1<sup>st</sup> That  
 Elements are present in it - & 2<sup>d</sup> That compound  
 principles are the products of vital action. - The 1<sup>st</sup>  
 are called Mineral Constituents, while the 2<sup>d</sup> are called  
Organic Constituents. -  
 Then we inquire, as to what is disposed to de-  
 structive action, - the products are Charcoal, Water,  
 Carb. Hyd. - Carb. Oxide &c. &c. - Hence from the residue  
 that it consists of Hyd. - Carbon, & oxygen: - and



There are 2 classes of salts of this metal:- those which contain the prot. exalted state of Chromium, & those which contain Chromic acid called Chromates. - The most important of these salts are the 2 Chromates.

The most important of these facts are the 2 Chromatids of Pol.-Chromatids of 3rd —

Character of Pot. is formed by heating with  
remains of Iron. The white acid is decomposed dur-

indicates, &c. to the Chromium of the Chromate No current

it into Chinese & give them combined with the 881.

as a Chromate Pot. which gave in precip. - where there

remaining a part of the District, to be separated.

Who a given part, - set. in M. - under. in. etc. - for. etc.

all matters, I have consulted with others

— salt forms a variety of esters. —

Abdominal is formed by making a procoelate of the

Phrenate lark, the p. black, which attracts the

base. - As for inst. in Chromate Pet. - it attests to the str.

— *de lacones a non est. qd in Redo det. Ann. Whittier*

Chromate of lead is found by mixing Chrom. Sol. & the.

Lib. & dead. - when a free p. found to govern by himself

as Chrono 'Hecce' or Chrono. —





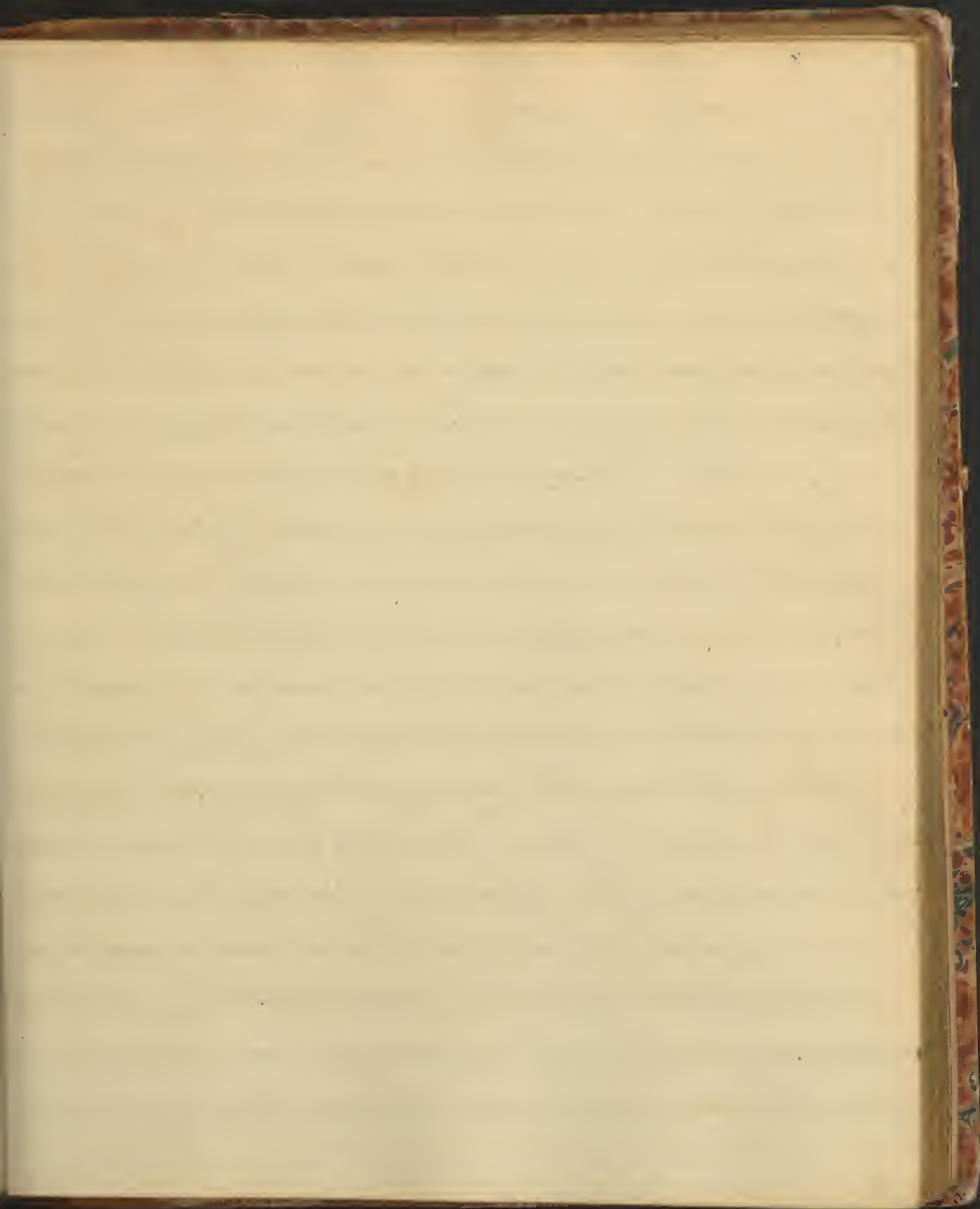
A Solution of rhubarb of 1st or 2nd water is  
formed by boiling 64 gr of rhubarb acid with an  
equal weight of pure tart. 1st. in a pt of water until  
it is reduced. Then add 50 gr of 2d. wat. Comp. & water  
is of a light wine colour. - Rhubarb dose of it about 10  
drops 2 or 3 times a day. - 10 drops about equal 1/10 gr of  
rhubarb acid.

Chromium, from Xgopa, colour. - indication of its be-  
ing to form coloured compounds. It is found in a min-  
eral called rhominate of iron, which is not, as it implies  
a comp. of Chromic acid (or of iron) & in Chromate of lead.  
It was discovered by Wauquelin in 1797. - It is bitter, of  
a greyish white colour, very infusible, attracted with mag-  
netism by acids, even the nitro-muriatic. Sp. gr. 6. -  
It forms 2 compounds with 24 - 32 pt. of Chromic Acid.  
Protox. of Chromium is of a green colour, insol. in water,  
& most in acids, unless in the state of a hydrate. -  
Chromic Acid is of a dark reddish purple colour, - solid  
in her perfectly pure, - soluble in water & the solution very  
much resembles the solution of iron. - It forms Chromates



there is the Ammoniacal sulphate of Copper - producing  
a green precip. which is the carbonate of Copper or Scheele's  
Green, which sulphate of <sup>Ammonia</sup> remains in sol<sup>n</sup> - the  
other furnishes a base for the Acid, with which it com-  
bines & forms carbonate of Ammonia. - & then can be decomp.  
by heat & water between the strips of Copper. -  
Another test is Ammoniacal nitrate of Silver, forming  
down a yellow precip. of carbonate of Silver where the  
Nit. carbonate remains in sol<sup>n</sup> - Reaction as before. -  
The most delicate test is Sulphuretted Hydrogen, which  
produces a deep yellow precip. of the sulphuret of silver &  
from this the nitrate is easily procured by subjecting it  
to heat with Chlorate of Carb. Pot. -  
. Nitrate of Silver is obtained by adding ammoniacal Acid  
in strong Nitric Acid, to which some Nitric Acid is ad-  
ded, & filtering to dryness. - The Nit. Acid is decomposed  
& goes up by itself to the atmosphere to form the Arsenic Acid.  
It is a white, deliquescent salt - has an acid, metallic  
taste, & with alkalies forms carbonates - salts which in  
solution always give red precip. with Nit. of Silver -  
Ammoniacal Hydrogen is abundant in nature. -





in fact which is found suitable. This however requires to be continued in an iron vessel. - It is a white, semitransparent when recently prepared, but becomes opaque by keeping. - has a vitreous fracture - sp. gr. 3.7 - sublimed at 350° - with taste is sweet, followed with a slight degree of acidity. When taken internally, it produces great inflammation of the stomach & lungs - it is remarkable that this inflammation will take place even when it is applied externally to wounds. It is soluble in Ethanol Acid & 10 parts boiling Water, & in ether to obtain a strong acid solution, it is best to distill it in boiling Water & pour the solution to cool afterwards, for could much more abundant Acid is thus taken up than by mixing it in Cold Water. - It is also in all the Phosphates in the Alkal. Alkal. & in Alum. Ammonium /u. 57. In the Acids it unites & forms a compound. - The method in which it is typically used most frequently is in the form of a fluid substance as an Alternative & Diaphoretic. - Rose / 8 gr. per ounce or Sol. of chlorides of Pot. - It is used in structure & intentionality to destroy life, it becomes necessary to reflect some talk by which it may be detected. - One of



Early - First Lecture Feb 20th 1834

adhesive occurs in the Earth's strata arranged with  
 from 2. as a Spherulite, 3. as a Spherulite combined with  
 from 4. Spherulite. The two are very prone to decomposition  
 those of Sphalite, hence it is usually a spherulite in the pre-  
 ceds of Sphalite & Sphalite, which, when heated, gives off st-  
 soue, the very surface, it is deposited in the chimney of  
 the furnace, in the form of a black mass. To purify this,  
 put it in a glass tube within an iron furnace, subject  
 it to a red heat, & pure Sphalite will come over. This is a  
 brittle metal, of a steel grey colour, - recent fracture of a  
 beads brilliant, but tarnished by exposure to the air. When a  
 peculiar colour when rubbed, - no factor, sp. g. 5.8 - 6.0  
 the spherulites are most numerous & heavy - at 180° it dis-  
 tines slowly, - when burnt, produces an adhesive matter, - is  
 fused at 356° of acter upon by forming the most adhesive  
 it forms a combination with oxygen, & produces a st-  
 soue acid, of which the former is usually found & some  
 on this, & some in Commerce.  
 Sphalite, acid is obtained during the process of roasting  
 Sphalite, when it is deposited in the chimney above the



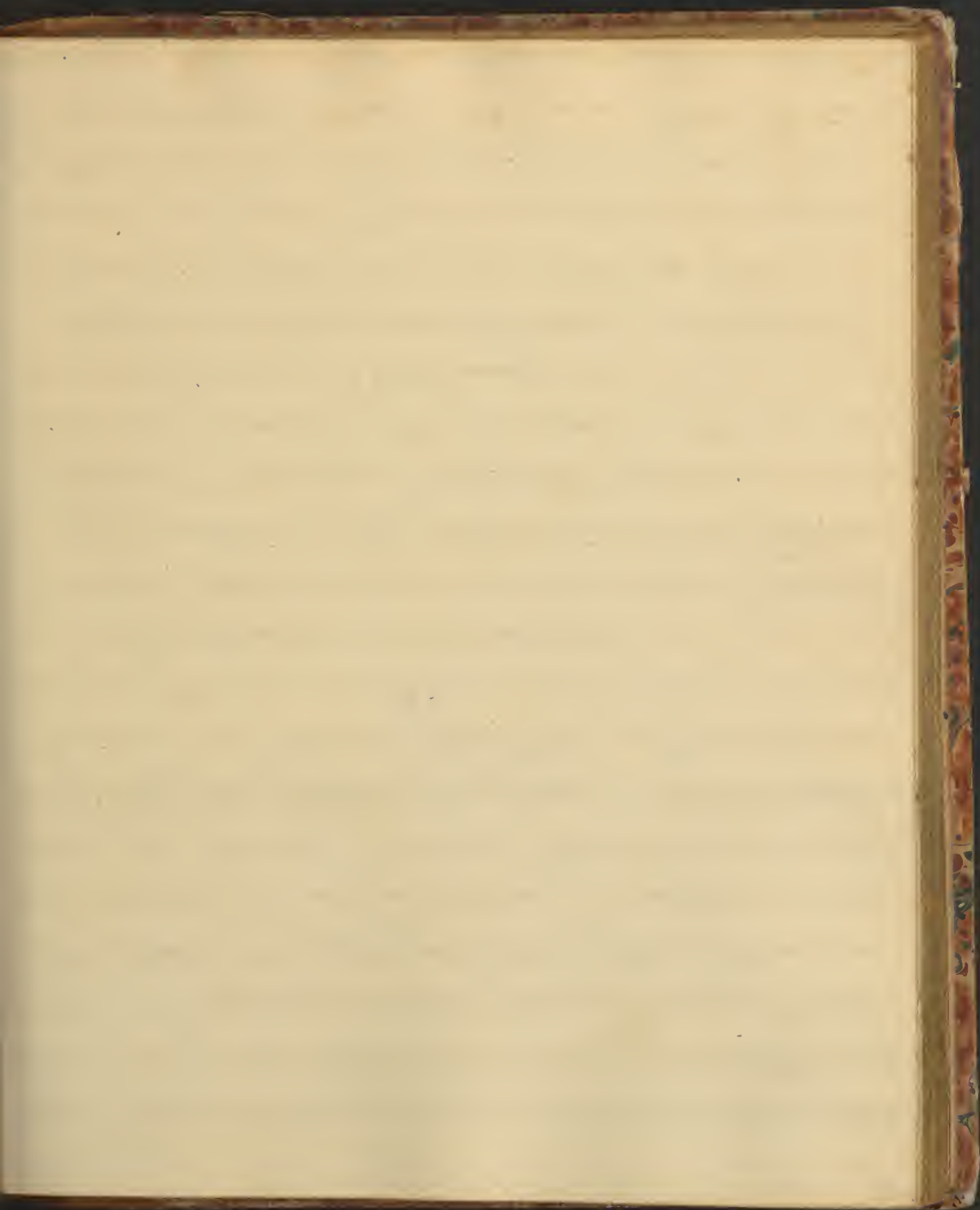


Chloride by containing 1 gr. Chlor. to 2 gr. Carb. —  
The first Chloride is the only one of importance. It is  
formed by burning (such as Chlorine Gas). Alloys, metals  
ing the sulphur of Carb. in Chlorine with about  
10th part of Chlorine Gas. The Chlor. of the Mur. Acid  
combines with the sulphur of Carb. to form a sulphuretted Hydro-  
chloride gas, which the Chlorine combines with the  
noted as such. I found the Chlorine of Carb. — A small  
to be used for an hour, — when cooled, filtered, into  
a gallon of H<sub>2</sub>O, washed, water freed from Acid.  
The same portion of Chlorine is used merely to de-  
compose any sulphuretted Hydro- Chloride which may remain  
+ thus give a white precipitate. — It was formerly called  
the powder of Alkalis or Butter of Alkali — is a soft, semi-  
transparent substance, of a yellowish white color. — crystalli-  
zation, fusible, & volatile at a gentle heat. — When added  
to water it produces Antimony Hydrosulphate  
of Chlor. — a white powder, found in minute, a certain  
crystals. — used to obtain Chlorine. — Antimony is that  
has been, that to produce Chlorine. — Antimony is that  
ed. — new — But H. S. — powder of Alkalis by formula.

Handwritten text at the bottom of the page, likely a signature or date, is illegible due to fading.

with a hole in the bottom, & having another circular hole  
 over the top, and subject it to a white heat for 2 hours -  
 Ration. By melting we convert almost the whole of  
 the sulph. acid. into the stroph. acid. - The horn is composed  
 of stroph. dimers, mixed with some carbonaceous matter -  
 - This latter is drawn off by heat, & we then have the  
 Ex. of acid & the stroph. dimer remaining together -  
 The dimer & stroph. acid. escapes altogether from the action by taking  
 2 parts of steam to 1 of dimer. - You also produce a different  
 out course. - It is an opaque, white powder, tasteless  
 inodorous, used in the preparation of acids - It was  
 intended as a substitute for James's Powder, which  
 according to Dr. Francis's statement of the 3<sup>rd</sup> March 1846  
 & 5<sup>th</sup> March Ex. of acid. - It is chloride in the state of  
 from 3 to 8 grs. every 3 or 4 hours - In larger doses, purgative  
 five & six - Used in polioidea ideas - but it has  
 been ascertained to be a different in its effects & do  
 uncertain in its state of oxidation, that it should not  
 be used in regular practice. -  
 Chlorine gives three combinations with Antimony  
 the stroph. - Oxide - & Chloride (which is the same as





acid. - The sulph. acid combined with the far forming sulphate of pot. & the pot. of sulph. combined with the oxide of copper & sulphur of acid & forms arsenic. It is of a liver-brown col. - opaque & iridescent. - When of a steel grey col. it is inferior - showing an oxide or base economy in the use of water. - Great quantities thus about 3/4 pint. & 1/4 cup. - Berzelius says it contains a compound of pot. & sulph. & pot. - It was formerly used in medicine, but is now laid aside, & employed only for the formation of tart. emetic.

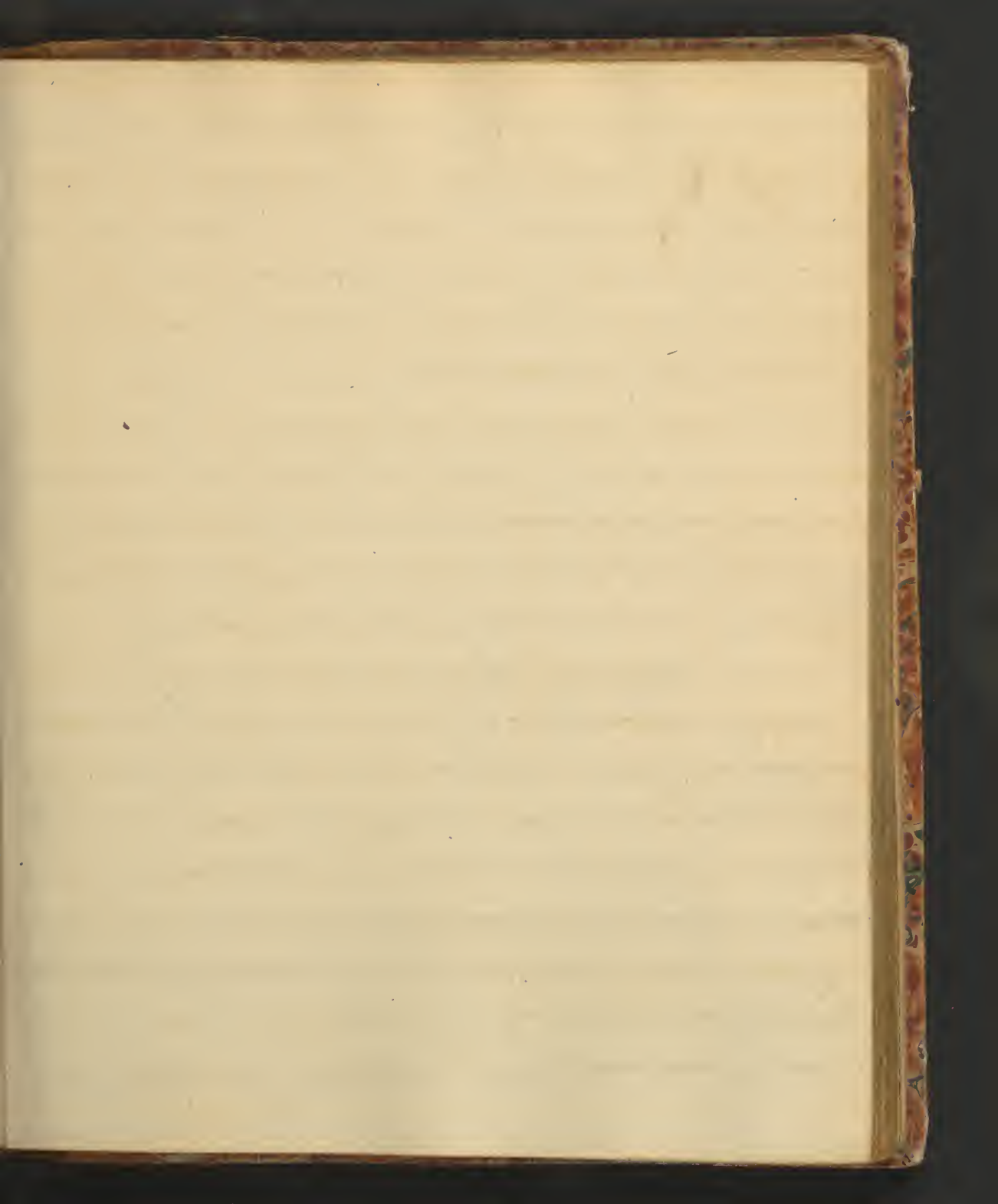
The glass is used to form tartar emetic by the reaction of arsenic, in which it is off, under name of tart. Nitrum. The process is used by the Ed. - the rays have no name for it, - but the first part of their proceeds for tart. emetic. -

Antimonial powder, - is Antimony oxidized & mixed with a certain portion of phosphate of lime. - formed according to Ed. formula, by mixing equal parts of sulph. acid & shavings of iron in a red-hot crucible, inverted, heating & stirring, until it assumes an ash-grey colour. - Whether it is in one or two crucibles.

Book of the Virgin Mary & of the Holy Spirit

Thus a part of the sulphur yet unaccompanied remains  
together with the rest - when fixed they form the Glaze  
It has been found an Egyptian stone, but its composition  
is not known. It is of a metastatic grey colour, the thin  
pieces by transmitted light, produce a greenish red colour,  
which is said to be a test of its good quality. - It is hard  
thinner, under a flint, - it is much used of Roman glass  
According to Sherrin, it contains 6 parts silica, 3 parts of  
iron, of these making it about 8 parts of 1/2 sulphur -  
The Glaze of glass is sometimes produced by sublimation  
inter se, but this is detected by its greater sp. gr.  
The Glaze of glass is an active preparation, but produces  
very unequal effects. - It is seldom used. - When made  
with May, it forms the barated Glaze of chimney, -  
The Glaze of red - is prepared by decomposing  
equal parts of As. Or. & Sulphur of 1/2 But in a red hot  
crucible. This produces a reddish matter covered with  
a white crust, - which must be washed to a red colour.  
Atk - The Alkalis of the Nitrate of part of the Sulphur  
are mutually decomposed. - The As. of the Nit. Alk. are  
sent the alkali into the state - of the Sulphur into the substance





it is a *diaphoretic* & *lacte*. - I think we may say he has  
 found it acts together in agreement, but this is not probably  
 the case. This however was uncertain. -

We may add a general remark that a true deuter-  
 ide & a protodeuteride are always represented by the same  
 equivalent numbers, - because the equiv. of deuter is  
 just twice that of tr. - hence 2 of tr. or the deuter. will o-  
 quival one of deuter or the protodeuteride. -

Of the Doctor's July 15. 1834. -

The deuteride is used in 2 preparations in Pharmacy,  
 either the Gladi and the leaves of *edulinarum*.  
 The Gladi of - deuter - formed by stronging deuter, upon a  
 shaken, irregular, earthy matter, heating till it  
 gradually increasing the heat to redness when no more  
 of the deuteride of a vapor will continue to escape.  
 When continue the heat, until it appears like the *Real Salt*,  
 then pour it out on a heated brass plate. - This is  
 that he reads a great part of the deuteride of the deuteride  
 is driven off & takes by from the rest of the deuteride  
 which is a much stronger - which that portion which is not  
 driven out is. - is converted into a deuteride. -

the Government for withdrawing their assistance by the letter  
written on the 14th of —

The sulphur of forms *Hydrogen Sulphide*, which comes  
 fuses with the *Carbon* & forms *Hydrocarbonate of Pot-*  
*ash* of the three countries with the water & forms  
*Cryst. of Pot.* which unites with the *Carbonaceous*  
*Sulphur*, & forms an *Hydrocarbonate of Pot.* - *Shaw*,  
 two being solutions of the *Hydrocarbonate*, with *Water*.  
 The *Hydrocarbonate*, here it is saturated, & then fermenting  
 it to gas, a certain portion is precipitated, & called  
*Stear*. - It was formerly used in medicine, & was a  
 secret preparation employed by a French Surgeon,  
 from whom it was purchased by the Government.  
 Gotten Sulphur is obtained by adding some water  
 numerous acid to the liquor from which the *Kermel* was  
 obtained. Another precipitate falls, of an orange yellow  
 colour; - supposed to be a *Sulphuretted Hydrocarbonate*, which  
 precipitated sulphuretted hydrogen, is effluence, & dist.  
 Such *Prep. (U.S.)* is formed by what may be called a union  
 of two preceding methods for *Formed & Gotten Sulphur* & is  
 somewhat intermediate between them. It is made by dis-  
 solving *Sulph.* what is sec. of *Carbonic* - then filtering, & adding  
 acid & *Hydrochloric*, instead of *Carbonic* - the medicine



Edw. Arthur. Johnson (D. 1872) - 1831

Edw. Arthur. Johnson (D. 1872) - 1831  
with his wife Mary Johnson - 1831

three ideas, the first is to show 500. It is a golden  
power, which is in water, & when heated it rolls over & over  
over. The Hydrate is which is made up of atoms -  
the Protoplasm is not a simple artifice, but is  
found in nature, after it has been fused & purified  
from sand & - and when in broken masses, they  
are called found of dust. It is used either directly  
or indirectly in all the medicines prep. of this metal.  
Then finely levigated it found the Protoplast substance  
of dust. dust. dust. (U.S.). It is a thick substance  
used as an alternative, given in scrupula, granular  
abstractions do. - in the dose of from 10 to 30 gr. <sup>grain</sup> 44th  
formed, Mineral is prepared by saturating a boiling sol-  
of Potash with borax & sulph. & straining it & allow-  
ing it to cool. - A powder is deposited of a deep purple  
brown colour. - The reaction is one of the most effe-  
cient in chemistry, because the composition is not exactly  
known. By some it is supposed to be an Equisetum  
upon the supposition we conceive the reaction to be  
that by the action of the boiling solution in the substance  
set, water is decomposed - Hydrogen is set over to the



It is of a dirty white or greenish colour, when fresh  
found a yellow liquid, which changes to an acrid  
tho' it breaks up all the medicines prep. of distilling.  
There are 5 combinations of it, as follows:-

1. unphosphatized acid, including phosphoric acid - common acid.
2. Sulp. combined with the protox. - called a. sulph.
3. Evolved & mixed with phosphate of lime, forms a distillate protox.
4. Protox. mixed with other acid forming distillates of dr. of dist.
5. Protox. mixed with tartaric acid & dist. forming distillate of a. d.

Staves or what is commonly called tartar Emetic. -

It forms 3 combinations with dr. one oxide 12 & dr. 12.

The Protoxide of Ant. - Equiv. is 44 + 8 or 64 + 12

Protoxide, or Antimonious Acid. 44 + 12 or 64 + 16

Protoxide, or Antimonious Acid = 44 + 16 or 64 + 20

The Protox. mentioned before is of a lead colour & is white

The Protoxide or Antimonious Acid is formed by distilling

distillate or Antimonious Acid is formed by distilling. But in



The first thing I noticed in my mind was  
 that the "white" people of the  
 South were not at all  
 different from the  
 rest of the world.

During these years we have  
 seen the only two parties in  
 the country are the  
 Democrats and the  
 Republicans.

broken & melted in a retortatory furnace, & thus we  
acquire an oxide of sulphur, which must be heated  
with 1/2 lb of Bruc. Vintur. The rationale is - that  
the Bruc. Vintur consists of Tartar Acid of Pot. - and  
during the heating, the Acid is decomposed, the Carbon  
taken up the Ox. where the Pot. combines with the sulph.  
I found a similar circumstance. - Sometimes it is heated  
with iron filings instead of Tartar, - & the prod. then  
is Sulphuret of Iron & Antimony is given off. - Thus  
not to burn as by the other process.

It is of a bluish-white color, - has a lamellated structure  
- is somewhat brilliant, & easily pulverizable, & emits a faint  
the color when melted. Sp. gr. 6.7 - Equiv. 44 or 64 to 100 parts.  
Tales water red heat, & fumes take fire in passing thru the air.  
It is called Regulus of Antimony, in Commerce, while  
the Sulphuret is called Antimony or Bruc. Antimony.  
When heated, it combines with Fe. & forms Antimony  
the Oxide. may also be formed by oxidizing the metal with  
nitric Acid & afterwards washing it frequently with Water, to  
purify it from Nit. Acid, - or - by calcining the metal and  
forming what is commonly termed digressive flowers of sulph.

For a more correct description -

It is the best thing I have ever seen or heard of.

with Argon - 5g which are divided 12 which are

Protonix =  $28 + 8 = 36$  The two acids are

Fluoride =  $28 + 12 = 40$  Manganous acid =  $28 + 14 = 42$

Peroxide =  $28 + 16 = 44$  & Manganic acid =  $28 + 32 = 60$

Red oxide =  $28 + 10.66 = 38.66$  The only one of

Acidic =  $28 + 14 = 42$  these compounds of argon

importance is the. Peroxide or Black Oxide, because it is

from this by heating we obtain Argon. - It is a black

powder, when exposed to a violent heat, it gives off 6c

becomes Red Oxide. -

Merly with Sature 15<sup>th</sup> 1834. -

The chlorinated Metals are ten in number. The most

important of the first we shall notice is Chlorine

It occurs in the earth 1. native. 2. as a sulphuret. 3. as

an oxide. 4. as a sulphuretted oxide. It is found in

Sweden, Norway, France, Germany & Great Britain. It

is most abundant in the form of sulphuret, from which

Antimony of Commerce is obtained. It is found in small

called Sangu, which are purified by melting them in cast

can pots, perforated at the bottom, the which when fused, the

metal runs down into a crucible below. This is taken up



Printed by J. W. Smith for Proprietor, J. W. Smith

it occurs in the province of N. Bruns. -  
 has been recovered in 1841 by Mr. West. - It attains pure  
 Pectin, like the Pectin in other parts. Acid,  
 precip. by Alcoh. Ammon. - then dry it & heat it to white heat,  
 we have pure Pectin (Spongy, of a black colour, & -  
 coming out like a stream of hyaline flowing upon it  
 shining as a white matter - not a bright as silver, nor  
 uncoloured ductile, & so soft, that it may be separated with  
 the nail. - by dry. Pectin is its only solvent - sp. 20.98 when  
 not fused - 21.5 when fused, & is the heaviest body known.  
 Equis. 99. It retains the highest heat of a furnace & is fusible  
 only by Haro's Iron Pipe, by Charcoal. A solution of  
 it in Nitromur. Acid is employed as a test to distinguish  
 between the alkaline solutions. - Alk. Potash. Soda. -  
 Mannanete is generally found in the form of the  
 Alk. Sugar, from this it is extracted by means of  
 warm alcohol matter. - it was discovered in 1794.  
 It is a hard brittle matter, of a greyish white colour, sp.  
 gr. 8.013 - Equis. 28. - It is little affected by air & common  
 heat. It is very infusible - all kinds of combination

Restoration used for arrangement de. The volume only  
\$30. - This also for back cover de

This, when it is met externally, is not white. It is found in the south in some  
 dried state. It is found in all parts of the State, but  
 in largest quantities in Indiana. It has been estimated  
 that the yield at about 32,000 lbs per acre. It commences  
 while the seed of the tree yields about 910 lbs. It  
 is generally found in sand or rivulets &c. It is extracted  
 by Amalgamation. First wash away the gravel & sand as  
 much as possible, then work it up with Mercur. & hold this  
 through a cloth. Wash the residue & dry it. The residue  
 is white to give off the Mercur. - Pure Soda is procured  
 by distilling Soda Linn in a retort. It is procured  
 by a set of Retorts of iron, then wash, dry, again  
 wash & precipitate. - It is a deep yellow. Metals, wash  
 in the air or by a single heat. - sp. gr. 1.9-3. - eq. 2000  
 It best retains a Aqua Regia. - a good test for it is  
 the formation of a film, forming a purple precip. which the  
 purple colour of Goldens, used in burning Potassium, which  
 Potassium occurs generally in the form of Potassium  
 grains, which contain some lead, from the copper, lead & they  
 are met in the burning Potassium & Potassium.



...of the ... of the ...

... of the ... of the ...

... of the ... of the ...

The *Altitudo* of silver is formed by *alutating* silver metal.

*Altitudo* of silver - if the *Altitudo* contain many *Altitudo*.

The *Altitudo* will be further in account of *Altitudo*.

If the *Altitudo* be of a permanent green color, which cannot

be driven off by heat - it contains copper - but if the green

color be only transient, then be expected, it is owing to *Altitudo*.

*Altitudo* - *Altitudo* - *Altitudo* of silver to be driven, the *Altitudo*

is, that the *Altitudo* is first oxidized by the action of a porous

form of the *Altitudo*, which the *Altitudo* oxidized.

of the *Altitudo* of silver is then oxidized by the remaining

*Altitudo* of silver - it is a white salt, *Altitudo* in *Altitudo*.

has an *Altitudo* - *Altitudo* (also) - in fact, in its own use of *Altitudo*.

*Altitudo* is by exposure to light - it is a test for *Altitudo*.

*Altitudo*, the *Altitudo* de - then fused heat with *Altitudo*.

it forms the *Altitudo* *Altitudo*, *Altitudo* (H.S.) - this is

complicated sometimes *Altitudo* in cases of *Altitudo* by the

does of *Altitudo* - but chiefly *Altitudo*, as an *Altitudo*.

The *Altitudo* of silver is not very important, but no-

need in order to remember that silver is not acted upon by *Altitudo*.

*Altitudo*, unless acted by heat, it is stable in *Altitudo* is

not of *Altitudo* - *Altitudo* as a test for *Altitudo* & *Altitudo* in *Altitudo*.

11854

Bye-bye to the old world —

It is a fine world here, it is a fine world here, it is a fine world here.

precipitate? well it with alum. It gives it some cohesion  
afterwards with lime water. - Why it does may give the  
lime powder a tincture, into a mass. - When precipita-

tion is a brilliant white powder, very minute & delicate  
of gr 10.5 - again 110.5 - at a bright red heat, retaining  
its brilliancy, hence it is called the action of both heat & air

It found the compound with 84 - oxide of silver -  
this is a precipitate of a dirty brown colour, formed by  
adding a sol of ammonia. It is a sol of silver -

Its equivalent is  $110 + 8 = 118$  -  
It found the substance - substance of silver or silver  
silver - about 25 to 30 grs. oxide of silver -

This is very readily formed in a vacuum of the affinity  
which these have for one another, so as to make them  
mutual both. It is a precipitate of silver by silver of  
solution in nit. - white powder, dense & heavy - becomes green  
at the exposure to light - silver is often obtained from  
the silver by heating it with carb. pot - solution of

silver is distinguished by being not. in 17. - same. - 110.536  
The base is direct to notice - a white - substance -



It is an account of the  
of the



My affectionate  
with a remembrance of my father & mother, - Dear and dear

For Ever last: by rubbing this up with the remaining  
Alumina we reduce it to a Neutrocarpotetrachate, &

The difference between them is easily seen

framed by the annexed diagram, in  
which no color, the impression we see

each vice, - resolved into their country  
wealth within the liver, & the result.

each vice, - resolved into their country  
wealth within the liver, & the result.

each vice, - resolved into their country  
wealth within the liver, & the result.

each vice, - resolved into their country  
wealth within the liver, & the result.

formed by the union of what is above the line (a) placed above, - those under the line (a) - under the figure. -

above, - those under the five (u) - under the figure. -

The walking is for the purpose of nourishing any Cor. dist.

which may have been found, others is still in water.

The den. of. walk with Anne - but this is no error,

because it had been proved, that the currency should

more Cor. Sect. - the Dist. is in effect the same furnished

with U.S. - The Gov. direct the Gov. Sec. to return up

with me. I then dissolved —

*Peripitatus latouchei* n. sp. in *Bull. Ent. - Ann. et Trav.*

by first forming the Protonates of  $\text{H}_2\text{NCO}$ , by adding an  $\text{H}^+$ .

with the Chinese official without heart, & then were introduced into

by Alter. Section - 1/2 in. of each - & there is found a

Malochia. More, which is proc'd. from the white of Egg. in Solutio.





precipitating by a solution of Carb. Pot. - Natron -  
 is that by dissolving, we get the Sal. Acidul. etc. etc. the  
 by adding etc. - it throws down the Prec. etc. etc.  
 which combined with the other, forms - etc. etc.  
 an acid, malleable state, and is used only as an  
 ingredient in solution for other medicinal  
 The Protocollars of these, or balance is off, under  
 2 forms - as prepared 1 by Sublimation, or 2 by Precip.  
 We have first speak of that obtained by Sublimation  
 item, which is ordinary balance, - it is off. in all the  
 Pharm. - Hydr. Chlor. (H.S.) - The formula is  
 to take of mercury 4 pounds  
 Subl. Acid 2 1/2 "  
 Coll. Sodium 1 1/2 " - Add 2 pounds of  
 the more to mix with the Subl. Acid, - not that up  
 with the remaining etc. - then add the Chlor. Pot. - mix  
 tie the pot into a glass of Sublimation - Wash the  
 quantity with strong Nitric Acid - into the solution  
 passes off without being affected by Ag. Ammon.  
 The nature is that we first by boiling, form a Sal.  
 which as in the commencement of the operation

Wagner's description (1871)  
Lithuanian Wagner (1871)  
Wagner's description (1871)

The white spines of the Wagner's collection

Peruvian Bark is a white, extract, with a sweet taste -  
 set in 20 parts. Dose ʒi ss weight of bark - This  
 dissolved in ʒi ss - it becomes a Vermiculated of the Body.  
 by the use of ʒi ss of ʒi ss - it is used in ʒi ss  
 its use of ʒi ss - Carbonated & Alkaline precipitate  
 its solution - With Alkaline of ʒi ss it should  
 what was formerly called ʒi ss Alkaline, or a  
 Mixture of ʒi ss Alkaline - very rare -  
 For ʒi ss is a mixture of ʒi ss, but in ʒi ss used is  
 a very efficient medicine - Dose ʒi ss to ʒi ss -  
 The best antidote for its poison is the White of Egg -  
 & ʒi ss the whites of 6 Eggs in a pot of ʒi ss - & give  
 it copiously to the patient - & acts by means of the  
 Alkaline, reducing the ʒi ss to ʒi ss - & ʒi ss  
 in ʒi ss with ʒi ss, & ʒi ss - ʒi ss to ʒi ss -  
 White precipitate is prepared by adding ʒi ss Am.  
 to a ʒi ss of ʒi ss - & ʒi ss of ʒi ss - & ʒi ss  
 & ʒi ss. ʒi ss there - ʒi ss Alkaline (ʒi ss) made by adding ʒi ss ʒi ss -  
 by adding ʒi ss ʒi ss. ʒi ss in ʒi ss ʒi ss and



Hyperborea (All. J. 1840)  
(Schubert & Schubert) (1840)

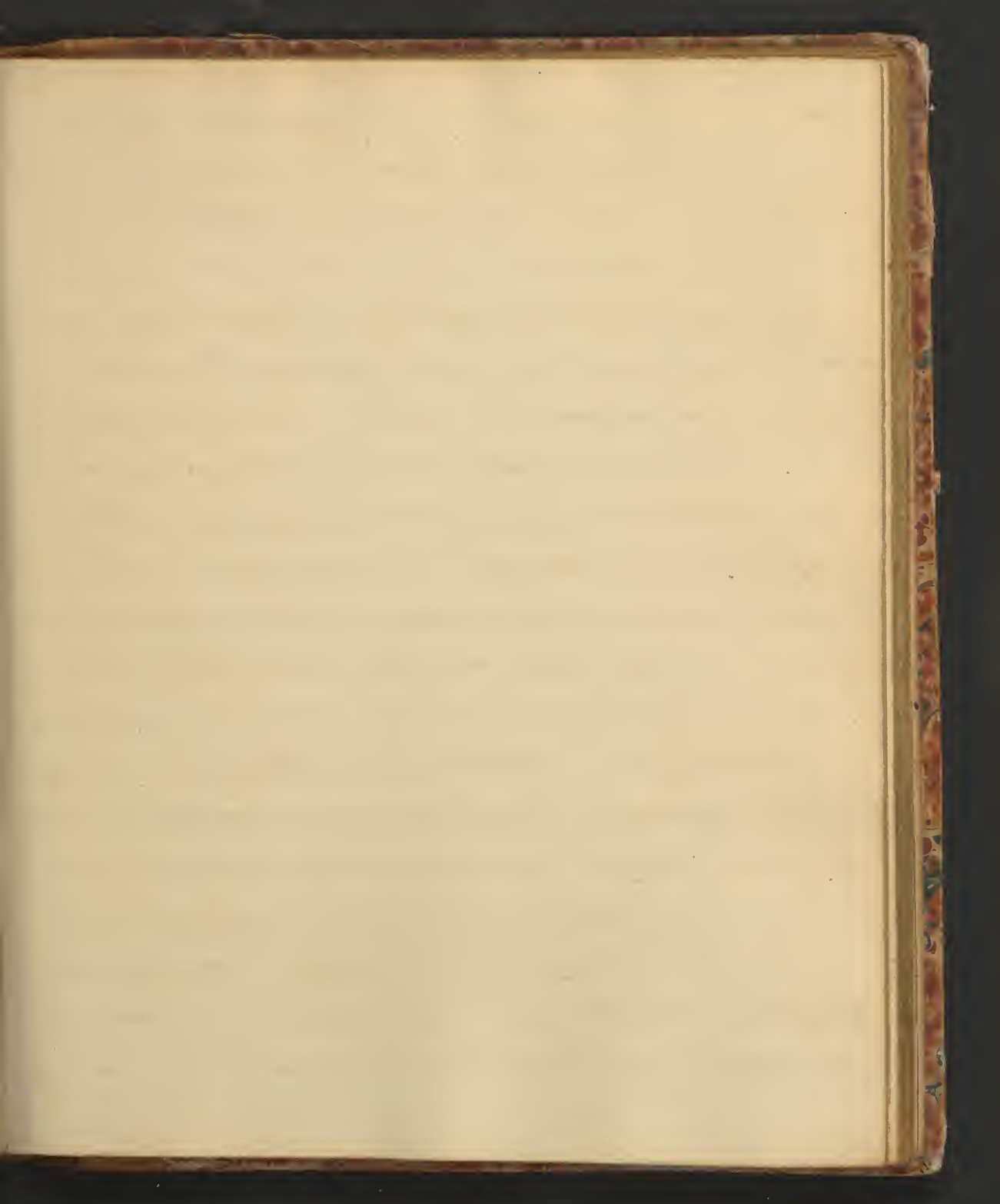
Hyperborea (All. J. 1840)  
(Schubert & Schubert) (1840)

Hyperborea (All. J. 1840)  
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(Schubert & Schubert) (1840)





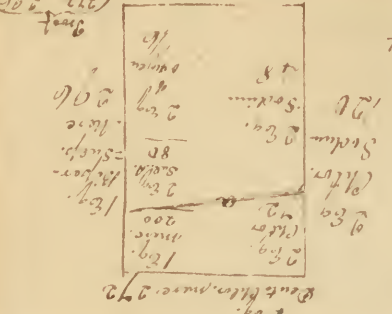
city. Even the *Diehard* of 11<sup>th</sup> 1834 -

Hereby united with chlorine found the Chloride.  
 Protochloride is likewise identical with Chlorine -  
 or Carbonic - with Nitric, Arsenic - White Phosphoric -  
 These we shall notice in this lecture, commencing with  
 Car. Sub. - we quote with a knowledge of this, the atmosphere  
 he better understood afterwards.

Protochloride of Chlorine is formed by heating these  
 in an atmosphere of Chlorine - or by distilling the dis-  
 oxide of Phos. in Nitric Acid - evap. to dryness, - re-distill  
 in N. Hydrochloric - it is off. in all the Phos.  
 Hyd. Chlor. Boromine (H.B.) - in a large degree it is

found by the double decomposition between it  
 Chloride of Sodium & liquor of Hydrochloric of these  
 which by substitution gives Protochloride of Phos.

or Car. Sub. - & chloride of Soda, as  
 by the annexed diagram. The water  
 stands on each side, - resolved into  
 their constituents in the middle of the  
 line; - those above the line (a) will be  
 form Car. Sub. - those below - Sub. Soda. -





*(Faint handwritten notes at the bottom of the page)*

a bright green colour, nearly indistinct in the air. It  
 is used in medicine, from 16 grs. -  
 - from 5 to 8 grs. it is powerfully emetic & apt to saturate  
 with much moisture. - Weight 216 + 40 = 256  
 The Nitrate is obtained by adding there in 1 lb. acid  
 the solution is of a green colour, Nitrate & H<sub>2</sub>O is given off. -  
 There are 2 Nitrates. - Nitric and Pernitrate. -  
 The pernitric is formed by the action of Nitric acid,  
 and is known by forming a black precip. with an alkali.  
 The pernitrate by the action of nitric acid and by  
 heat - added to water, a yellow pernitrate. - It is dis-  
 tinguishable in solution from the pernitric by forming  
 an orange coloured precip. with an alkali. -  
 The Nit. Mercury enters into the composition of Nitro-  
 Sulphur, which is formed by adding Mercury to  
 Nitric acid, forming it with the acid. -  
 metallic. - It is preferable, that it should be made with  
 Acids first die, because when thus prepared, it remains  
 dry and good for a great length of time. - The office  
 of Nit. is *Hydrant* & *Chirato*.

Young - H. F. T. 24. 4. 7. 18. (22)

Young - H. F. T. 24. 4. 7. 18. (22)

Young - H. F. T. 24. 4. 7. 18. (22)

the only salts of Mercury, exhibiting three notes in  
this declaration are the disphoric & vitriol.

There are 2 sulphates for disphoric acts on Mercury  
only when concentrated & heated, & according to the quantity  
of either the acid or the Mercury, & the length of time it  
remains which the process is continued & we have the differ-

ent results either of a vitriol or a disphoric  
There are also 2 sulphates - a disphoric & a neutral  
disphoric. - The disphoric is formed when the  
Mercury is heated with its own weight of due amount &  
the process stopped before it is regarded as produced. -

To be the neutral disphoric. Both are sparingly  
soluble in water. - The disphoric is formed by boiling  
Mercury with its own weight of due amount & boiling  
to dryness, we get the disphoric which is all in the  
state of disphoric. - It is not used in medicine, but

is a tharmer for the purpose of obtaining the Regular  
Sulphur or vitriol. - It is used in medicine.  
top in all the tharmer. - It is used in medicine.



St. John's by the Sea  
G. W. H.

St. John's by the Sea  
G. W. H.

St. John's by the Sea  
G. W. H.

for intense relation than the first two. -

With sulphur, Mercury forms 3 sulphur - 3000000

the sulphur, a sulphur, & a sulphur, & a sulphur -

The regular sulphur is found by passing a stream of

sulphur, through a solution of the phosphate of

It is a black powder. Again,  $200 + 16 = 216$  -

The sulphur is again,  $200 + 16 = 216$  -

It is prepared by adding mercury to melted sulphur -

nothing they made to powder and subliming - It is a solid

liquid, white, porous, and is used

in the preparation of sulphur - It is a solid

the more known form of it - It is a solid

preparation for sulphur - It is a solid

it is the finest in the world, produced in the

there is a 2<sup>nd</sup> sulphur, which is a 2<sup>nd</sup> sulphur -

These sulphur is of a black colour - It is found by

nothing together equal weight of mercury & sulphur, has

the sulphur appears to be an uncertain preparation

It is an intermediate substance - It is 3 to 3000000

It again is 200 + 16

It is a black powder, found by the same process -

The principal argument in the

The description is esp. in 2<sup>nd</sup> form - as proposed 1. by heating  
 Mercury per se & 2. by the action of vitric acid. - The 1<sup>st</sup>  
 is esp. in d. dist. <sup>any</sup> dist. by distill. it is obtained by exposing  
 there to a heat below boiling point for about 6 weeks -  
 it is in small brilliant scales of a deep red colour -  
 It is aerial, corrosive and poisonous - was formerly  
 called Encaustic. Mercury or Red Precip. per se.  
 That which is obtained by the action of vitric acid had  
 different names. esp. by Rulmann (M.S.) which is the same name  
 with that given by the old Gal. colleges to Encaustic. Mercury  
 hence there is liability of error, regards when we must guard  
 this former by adding Above in vitric acid & evaporating  
 it dryness. - This appears to heat to drive off the vitric acid -  
 off is a red powder, with an aerial & metallic taste - poisonous  
 - soluble in water very sparingly - black when heated, but be-  
 comes red again upon cooling. - It is sometimes used in  
 the red oxide of lead, which may be detected by throw-  
 ing the subjected substance on a hot hot iron plate, which  
 shows that it has the taste of it. - It is equal to  $200 + 16 = 216$   
 Both these peroxides are analogous as each metal, or stannum -  
 being distinguished - the Encaustic Mercury is better named



1841 to 1842 (2000)  
1843 to 1844 (2000)

1845 to 1846 (2000)

1847 to 1848 (2000)

1849 to 1850 (2000)

in an iron spoon, till pure, nothing will remain. And-  
 then, add a few drops of oil, which will give it  
 a fine taste. Leave the Mercury untouched.

The Coleridge is formed by keeping a distance in a row  
 with Rye, and then a distance - On the other side -  
 not less, an excellent agitation, hence it was formerly

correct. A third has seen - It is off. we are the Char-  
 -ty. Dr. Higgins (11.5) - Hyatt. Dr. C. (11.5) - 2 can-  
 -other. The former prepared by the action of a solution of

Cause 2d. on Affidavit, there or otherwise, if the latter  
 by the action of Discreetness or Reason. - 2d. by  
 is joined also by Intimating there, with some border or

medicines substance, as for inst- when triturated with  
Alumina, washed, & Magnesia is added to it, it forms  
Hyd. cum Magnesia (but) - with Ferrum forms Hydr.

cum confectioa variata, (u. s.) - dose of each of these 2 - from 3 grains  
 thickened with Rhenish Ros. & Licor. Ros. 3. - in form of the  
 Mass. Hyg. or Blue. Pile. Dose as a Cathartic 10j - act. 3

With dard direct-forms. Here. But - Thus. My arrangement  
 Its origin is  $200 + 8 = 208$ .



My 1st lecture. Oct 9. 1834 -

Mercury is found in the earth, native & combined with sulphur, as a disphoret or native Minnatar. & 3. Volcanic, called Azur Mercury. - Its mines are in different parts of the world. In Europe, in Spain, Germany & Hungary. - It also in Liberia & Japan. In S. America, in Peru & Chile. - The most productive mines are those of Italy, Spain & Peru. - The sulphur is most abundant & from this, the more of mercury is principally obtained. It is treated with lime & the mercury distilled over from the retort. - It is generally pure, but sometimes contaminated with lead, tin, & arsenic. de.

It is all in all the Char. of Mercur in the Mat. Med. ed. & Mercury (H.S.) - It is purgative for phlegm. - either by distillation per se, or with iron filings & off is liquid at ordinary temperature - a brilliant white. - sp. gr. 13.5 - Boils at 396° Fahr. - Free at 660° Fahr. - It is unaltered under Water.

Then it is adulterated with Vin. de. - it will not have the true fluidity, & a probe as it runs into a portion with the finger. - This has led to the evaporation a portion

Figur. superiora to be 200. - It is unalterable under Water.  
When it is adulterated with Oil. &c. it will not have the  
due fluidity, & a globule of it will sink & it runs into a line  
with the finger. - Thus that test is to evaporate a portion





undergoes no change under water, - is not to hand as  
Copper, - fusible. - sp. gr. 7.8. - Equiv. 2. - fuses at  
476°, & afterwards oxidized. -

This metal was first mentioned by Sprengel in 1780.  
with it - it forms one oxide called the oxide of Bismuth  
which is obtained by dissolving the metal in  
nitric acid, - precipitating by N. & igniting the precip.  
Also by burning the metal. -

Bismuth - is fused by burning the metal in Chlorine  
or evaporating the Ammonia. -  
The oxide is worthy of notice for its & substrate. -  
The chloride is formed by dissolving Bismuth in nitric  
acid, - evaporating & distilling the form. -

The substrate is off. in use than last year. - Bismuth  
is made by dissolving Bismuth in fuming Nit. acid with  
for dist. N. - filter & add Aq. alk. N. - wash & dry -  
It is a white powder, insol. in N. - is found in Antimony-  
medic. - Dose ʒ to ʒss - 2 or 3 times a day.

Heart Mice is made by precip. a sol. of Nit. Bism. with N.  
Chlor. Sodium. - It is used as a paint for the copper & silver  
is blackened by the solution of Hydrogen. -

Mr. West Point  
The above is a list of the  
names of the persons who  
have been admitted to the  
membership of the  
Society since the last  
meeting.

Respectfully,  
Your obedient servant,  
J. W. West

Received of Mr. J. W. West  
the sum of \$10.00  
for the year 1888

by digesting the Glycer. and copper in Mur. acid. -  
those when exposed to heat become blackened. -

Carbonate, - is obtained by precipitating a solution  
of the Carb. with Carb. Pot. - It is called ~~Carbonate~~ <sup>Carbonic</sup> ~~Potash~~ <sup>Potash</sup>

In the arts it is obtained from the Carb. Pot. & Carb. Acid. -

Copper alloys with Zinc forms Brass, - with tin  
forms Bronze and Steel, metal. -

The best test for Copper is its reaction at 60° which forms  
a reddish brown precipitate. -

Plumb. the occurs as native Plumb. - 2. Alloy with  
Antimony & Cobalt. 3. Suphur. 4. Oxide, called Plumbago.

Antimony. - The native of the alloy found in the Plumb. of  
Antimony. - It is a rare metal found in Sweden, France,

England & Africa. - Its most abundant in Saxony. It is  
extracted from nat. Plumb. by fusion, - from the alloy by

distillation from an iron tube & kept in a state of fusion  
until the ant. Sulphur are given off. - ~~the~~ <sup>the</sup> ~~Antimony~~ <sup>Antimony</sup>

Also in the acid & precipitating with Water, - then  
rinsing & drying it to heat with a black flux for a hour

As antimony, - we obtain pure Antimony. - It is a white  
metal, tinged with yellow or pink, - lustrous in the air.



— *Large scale in blue ink.* —

The salts which we have noticed, are, Nit. dupl. Mur. stant.  
 The latter is obtained by the action of which is decided in  
 water with 3 times its weight of water upon Epsom.  
 It is easily decomposed, of a blue col. - a solution of  
 it is precip. by a mucous substance, & a layer  
 quantity dissolves it. -  
 The sulphate is obtained by dissolving Epsom in dupl.  
 water at a boiling heat, & evaporating the solution. It is  
 called blue stone, has a strong styptic taste, and  
 does not regulate things, - is set. in 4 parts of water 1/2 of  
 boiling M. - effluence slightly in the air. -  
 It is a powerful & purgative, - in the dose of grv -  
 Epsom is employed as an emollient, stimulant &  
 by some. Ammoniacum (H.S.) is made by mixing  
 3/4 of Epsom with 3/4 of bark. This is of a blue col. - has  
 a hot, styptic taste, & becomes green by exposure to air. -  
 Dose. about 3/4 of a day - is used in the chronic. -  
 There are two Epsoms, - Eps. & Epsomate. -  
 Epsomate is a salt with difficulty upon metallic  
 copers, - under action by heat, - but readily on a strong  
 - forms a carbonate. - The Epsomate is formed

Dispersed (cupin/6a) - Superficial (1000 ft) -  
about 1000 ft. deep, 1000 ft. deep.

Dispersed (cupin/6a) - Superficial (1000 ft) -  
about 1000 ft. deep, 1000 ft. deep.

minerals with a clear space of 1000. - 1000 ft off what is  
precipitated in the form of a white solid substance  
This is a metal of a fine red color, has a crystalline  
color when broken, is a carbonate of lime, - not known  
in nature, found at 2700 ft. - 2700 ft. - 2700 ft.  
This is a carbonate, forming with a green flame. -  
With 1000 ft. - 1000 ft. - 1000 ft. - 1000 ft.  
The stone is formed by melting the stone of the metal  
in 1000 ft. - 1000 ft. - 1000 ft. - 1000 ft.  
A red color, in the state of effluence, - of an orange color.  
It is dissolved by none of the acids, except the Muriatic.  
By the effect it is converted into the form of a metal, -  
The stone is obtained by precipitating a sol. of lime, -  
with bar. bar. precipitating the precipitate. - by igniting  
the nitrate of copper. - with a black powder, -  
the nitrate of copper. -  
The sulphuret of Antimony with green native.  
The stone will be noticed under the Muriatic.



There is a small river in the mountains.

There is a small river in the mountains.

There is a small river in the mountains.

Therefore - is formed by adding an alkaline earth to a  
 sol. of Am. Sulf. - it is white - evades Nitric Acid -  
 The 2 best tests for lead are Sulph. Hydr. which forms a  
 black precip. + the sol. of Hydr. Arsen. Det. - which produces  
 a yellow precipitate -  
 It is important in a medicinal point of view.  
 It is a white matter, forms 2 oxides. - Cognit. is 50. -  
 Quercus plant is said to be Antiseptic. -  
 Gallicum was discovered in 1817 by Berzelius -  
 It occurs in 50. -  
 J. J. Berzelius. Vol. 6. 1834. -  
 Copper is found native in 4 different states. Native Copper  
 is the most common form that the copper of Commerce is  
 principally obtained - it is extracted from it by breaking it  
 heating it in a reverberatory to drive off the sulphur & obtain  
 which may be brought - & again subjected to the heat of the cop-  
 per which is put into water in the case of commerce - the water  
 be extracted & mixed with the Oil of Commerce. - This however  
 is not a perfectly pure, but to obtain the pure Copper we  
 must reduce some in a Hydro. Acid - & mix the solution



pillation of <sup>Galina</sup> virginiferous root. It is in seeds which  
 are partly yellow, partly of an orange red, - contains a  
 little black seed. - It is used in the art for painting, &  
 for making black stains - In China, for red, black & blue  
 the berry is ground by beating the dead with white  
 stone. - It is a tattered powder, of a brown colour, - when  
 heated becomes <sup>Protonides</sup>. - Red dead or <sup>Alumina</sup> alumina is  
 a variety of the berry, - and is obtained by exposing  
 the berry in something like an oven to heat and air -  
 It is very heavy, - of a deep red colour, - tattered, and  
 when heated, fused it is converted into dark brown glass.  
 Acphur occurs naturally. - <sup>Carbon</sup> Carbon  
 Rhinoco of lead is formed by the precipitation of  
 a set. Set of lead with <sup>Carbon</sup> carbon. - It is a white  
 powder, slightly set in the when fused, non-combustible.  
 The salt is the metac are <sup>Set</sup> set. In sp. & Carbonate.  
 The mine is formed by reducing the metal in distill  
 Mine stone. It is in form of white crystals, - styptic taste.  
 Acphur is formed by reducing the metal in forcing  
 Sulf. acid. - also in double compound of a peroxide of  
 Sulf. acid. - It is white, almost in white the. set. in sp.



25  
Vesp. Head is present in numerous small pieces —

Point called Point of View is a distance

view on a highway, and is a place for the —

Point called Point of View is a distance

Point called Point of View is a distance  
are raised

a trail of water, to separate the water from the  
Capitulation is a negotiation of peace to end a

Carthage of wine or balsam, occurs naturally - this

offered wine as balsam made from it called dunnis  
Cerato. - Earthy may be obtained by heat  
a set of due time with heat for - off is used as an ov-

form, application to the eye, - attention the -  
dead occur in the earth in 3 states. 1. as a

most called Salina, 2. oxide, 3. in degree combination

The lead of commerce is obtained from the displacement by  
boiling it then recovering it by charcoal. - It is a tree-  
known metal of a bluish-white colour, lustrous when  
exposed to air, & oxidized by the continued action of air  
& water, has a peculiar taste & smell, melts at 600° - has

a sp. gr. of 11.2 - begins to melt at 104° -  
with it, if found & added, - into a for - and there are

also varieties of these. 1. - (Alloys) & then lead or Manganese  
obtainable of lead, - is obtained by igniting the precipitate

of white lead by heat for - this an insoluble precipitate  
country, present in the Sack of lead, which the driver is

not satisfactory. - In commerce, it is called Manganese -  
Alloys is a variety of the Ores. - It is an impure

Artificial Ores of lead. It is obtained during the ex-





There is an impure form of lime which occurs nat-  
 ural - it is called *fat lime* this is used as an application  
 of sulphur of lime or *fat lime* occurs natural -  
 (chloride of lime) - to be noticed under *hydrates* -  
 Chloride of lime is made by digesting lime in water, in  
 which solution had been (sulfuric acid) - it is deliquescent -  
 the salts to be noticed are *hydrates*, *hydrates of lime*  
 The *hydrate* is prepared on a large scale by reacting the  
 active *hydrate* - it is called in commerce *white hydrate*  
 it is off - *lime sulphate* (U.S.) is obtained by *absorption*  
 in the *hydrate* - it is purified by exposure to the air, then  
 separating a pure *hydrate* in the solution - it is a white, crys-  
 talline salt, - set in air - has a strong, styptic taste -  
 it is used internally in doses of 1 to 5 grs as a tonic - from 10  
 to 30 grs is a powerful emetic - *hydrates* it is employed as  
 a sedative and antispasmodic application - 3 grs of it, with an  
 equal quantity of oil of lemon, dissolved in 4 oz of water found  
 to be a *hydrates* - *hydrates* - *hydrates* - *hydrates* -  
 Chloride of lime - is formed by the action of *lime* on *hydrates*  
 in *hydrates* - it is not *hydrates* - *hydrates* - *hydrates* -  
 substance, it has *hydrates* of *hydrates* a *hydrates* or *hydrates*





The two last both for them are the corresponding of  
 det- which found a blue precip. the thick. bases, which  
 produce a black precipitate. - - -  
 Wholly earthy texture. It is 4. - 1834 -

"also occurs in the Earth as a sulphurated carbonaceous  
 or as a carbonate carbonaceous. - The sulphur is  
 most abundant from the time of formation or  
 before it is produced. - Pure wine is obtained by this  
 acting upon in alk. alk. acid, depending on the  
 solution a place of pure wine. - then precip. by carb. sol.  
 I treat the precipitated carb. wine with Rhassas de-  
 it is a matter of a little white carbon. - Sp. gr. 7. - is  
 not very malleable, but at 300° can be rolled into  
 thin plates. - It fuses at 680°. - It is melted in the air.  
 Its equivalent is 34. - It combines with H. &  
 found an oxide of zinc, which is prepared by burning  
 the metal (Zn) - or by precip. (don't H. S.) - It is a  
 white powder, & frequent when obtained by com-  
 bustion. - It is employed as a tonic & antispasmodic.  
 Don't know its use. - An Antacid is made with  
 alcohol or the carbonate - (don't know its use.)

By reading you will be able to find, find, find, find  
with 1/2 chance - because you are

the probability of finding a number

difficult to find in account of finding, because you are  
with the probability of finding a number

by finding a number (1/2) - because you are  
finding a number (1/2) - because you are  
finding a number (1/2) - because you are

then last. Doan's (N.B.) for Rheumatism is formed by  
expressing three pieces of bone to the air with moisture

It is a sulphuric point whether this is a Kankar.

There are 2 Muscles. - One of Constrictor, these are

usually heard lose the elements of N. & from the

breast is formed by absorbing the Protophytes in

the Mus. Area - It is a pure form - crystallizable

Set in N. - more in the - Muscular in mass. 3736

The Constrictor is composed of medullary and is

formed by absorbing the Constrictor in Mus. Area of water

acting to Argento. - It has a very strong taste, it is set

in N. & etc. - Argento is 1/2 of Argento & 1/2 of Iron -

An Acetic Acid of it is set - made by absorbing

the weight of Arg. (N.B.) - It is of a dark red colour

has a strong styptic taste. - Since then. - It is

used as a Collyrium. - It is 10 to 20 drops - 2 or 3 times a day.

It is a Constrictor. - It is obtained by distilling a mix-

ture of the red ox of Iron with Mus. Area. This is a

Constrictor. - It is a very strong set. - This is a

Constrictor. - It is a very strong set. - This is a

Constrictor. - It is a very strong set. - This is a

Constrictor. - It is a very strong set. - This is a



First illustration of Helen Hunt

Next illustration

on a much more accurate account to the  
of the 11. It is decomposed by these reactions of earths  
which precipitates the silica & carbonates.

deep. It is found in the mountains of the Alps - & also  
from 16 5/8 - 3 lines a day - that is - in the mountains -  
precipitate of the term (shale) is formed by  
any of the silica of the. It is precipitated. It is  
a thick gray powder. - It is a chalky substance. - It is found

5 to 10 lbs. some times a day. - Logans. 11 28+36 - 64  
abundance of the. - It is formed by the decomposition  
between the silica & the carbonates. - It is 22+36 - 38  
For the precipitation (H.S) is made by taking 3/4 of  
the powder & 3/4 of the. It is made by taking 3/4 of  
mixing the solution. - It is a chalky substance in solution  
which the. It is precipitated. - It is a chalky substance

it is of a reddish brown color. - It is a chalky substance. - It is found from 5 to 60 grs. -  
at certain the silica & the carbonates. - It is found from 5 to 60 grs. -

Dr. Joseph H. S.  
Lecturer of Geometry & Trigonometry

With sulphur, - you found the compound, - both of which  
are found native, - but the sulphur may be prepared  
artificially according to H. D. - by heating sulphur to  
a red heat in a crucible with twice its weight of  
iron. - It is of a steel black color - Used to obtain Sulphuric  
acid. - you found the following - native in the  
With Carbon, - you found Plumbago, Coal, &c. - these  
but these are unimportant in a mechanical point of view.  
The Ductile of Iron are ductile, - these we have  
of sets of cast - The Plumbago, &c. - of general  
characteristic distinction between these classes, is, that  
the Plumbago are usually found, - crystalline, - become  
reddish brown when exposed to the air, & melt in fire -  
like the Ductile are generally brown, - uncrystalline,  
delicate in structure. - The ductile which we find in  
Iron at present are Sulphates, Phosphates, Carb. & Magnate.  
There are 2 Sulphates. - Proto, & Pero. - the Proto is very  
common & known under the name of Epsom salt. - Green  
vitriol. It is crystalline, of a light green colour, and is  
prepared by the spontaneous oxidation of the native  
Sulphur. - For instance we have, if should be made



Don. Supplement (100)

a substance which is blue - a ferric salt is it.

and an intermediate, of a dark brown -

The Protocloride is obtained by passing a stream of  $H_2$  over the ferric chloride heated. - Also, in the form of a hydrate by precipitation, as when we add a solution of  $FeCl_3$  to a solution of the Protocloride of iron. -

It is a dark blue powder - attracted by the magnet. Combustible, when burnt like up  $Fe$  - becomes a  $Fe_2O_3$ . Its equivalent is  $28 + 8 = 36$

The Ferric chloride is more by absorbing iron in which it is - and adding an alkali - as ammoniac. - It is of a brownish red colour, not attracted by the magnet. - and is called Salphen of Mars. (green) - reducing range - equivalent 44. The intermediate  $Fe_2O_3$  is of a black colour, and formerly considered a ferric - it is found where iron is heated to redness in the open air - also by passing steam over  $Fe$  -

Hot iron. - It is a powder, attracted by the magnet. - The  $FeO$  and  $Fe_2O_3$  are  $FeO$ . - Ferric Oxide (Protocloride) is not by absorbing the  $Fe_2O_3$  of iron to a red heat. - ~~It is~~

$Fe_2O_3$  is  $FeO$  in contact with iron from the scales at the blast-furnace is pure, by washing - drying the magnet. -

There is more property a day  
-

of the same kind as the property in  
England, Ireland, & the United States  
-

July 1st 1834.

It has been, we have taken up the theory that every  
nature, we have taken up the theory that every  
it in nature. The first we have noticed is that

occurs in nature in several states - 1. Solid. 2. Liquid. 3. Gaseous.

The black fluid of the eye, of the ear, of the nose, of the mouth,

3. Solid. 4. Liquid. 5. Gaseous. 6. Solid. 7. Liquid. 8. Gaseous.

4. Solid. 5. Liquid. 6. Gaseous. 7. Solid. 8. Liquid. 9. Gaseous.

5. Solid. 6. Liquid. 7. Gaseous. 8. Solid. 9. Liquid. 10. Gaseous.

6. Solid. 7. Liquid. 8. Gaseous. 9. Solid. 10. Liquid. 11. Gaseous.

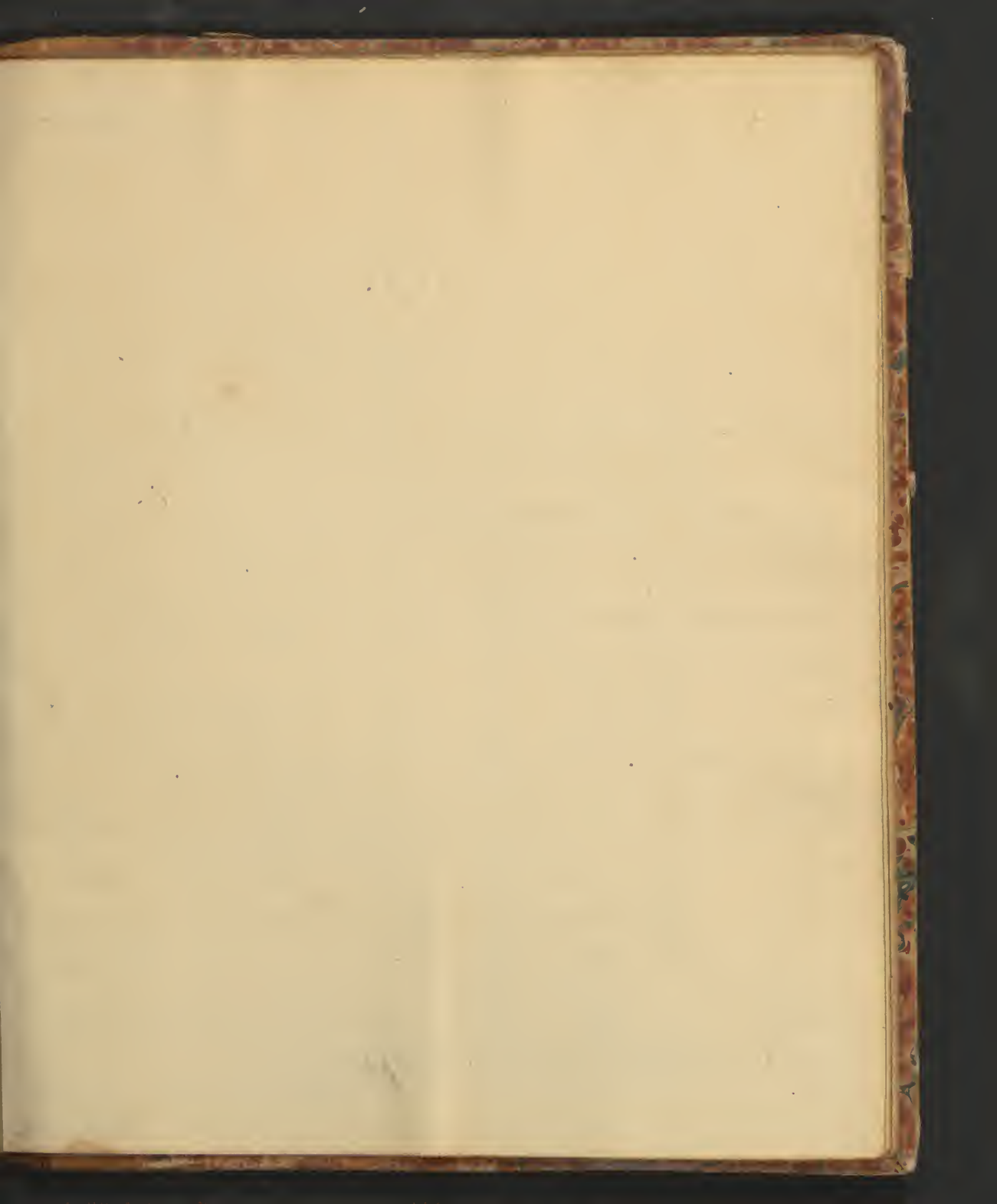
7. Solid. 8. Liquid. 9. Gaseous. 10. Solid. 11. Liquid. 12. Gaseous.

8. Solid. 9. Liquid. 10. Gaseous. 11. Solid. 12. Liquid. 13. Gaseous.

9. Solid. 10. Liquid. 11. Gaseous. 12. Solid. 13. Liquid. 14. Gaseous.

10. Solid. 11. Liquid. 12. Gaseous. 13. Solid. 14. Liquid. 15. Gaseous.

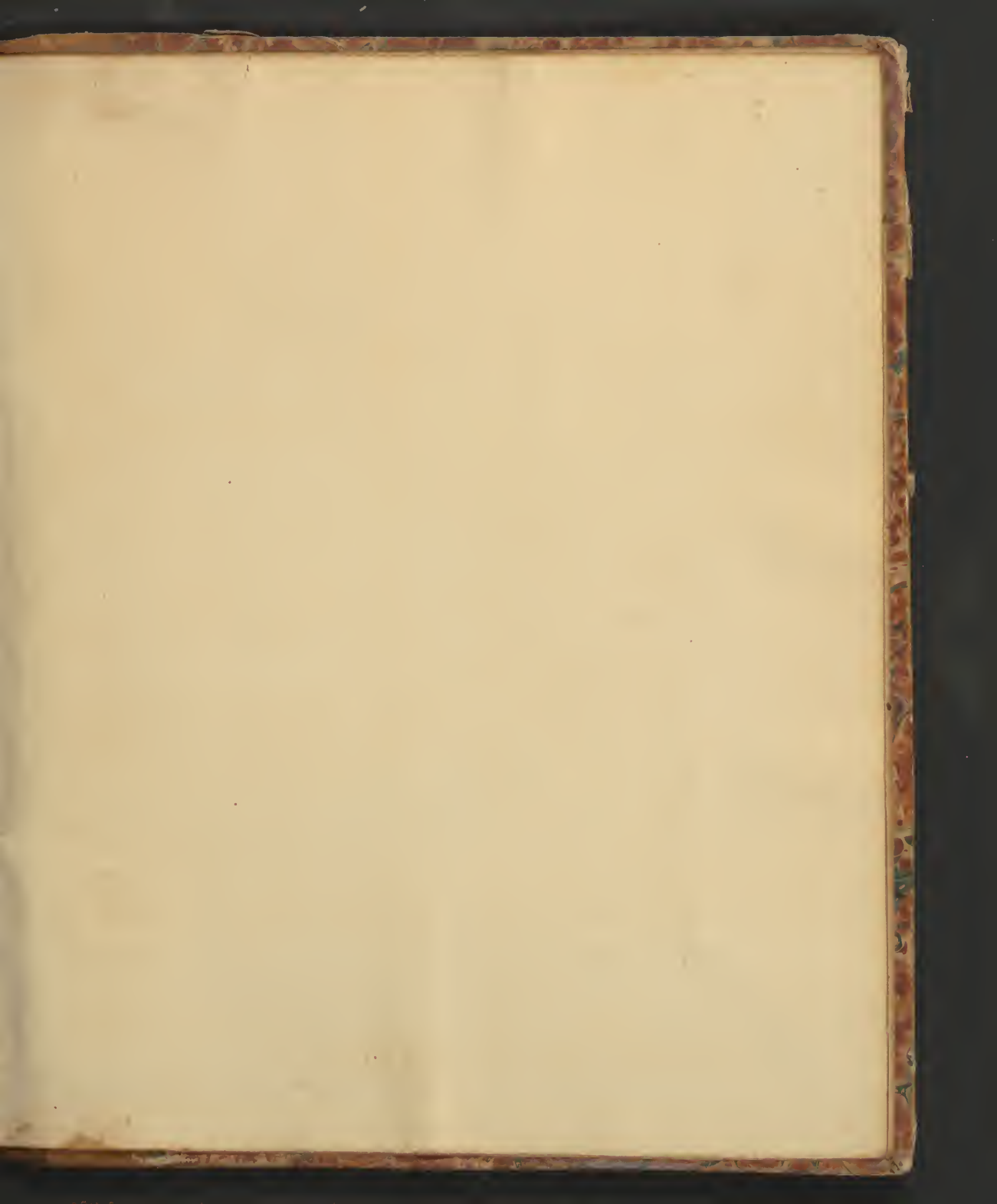




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103  
57  
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For the first time  
I have seen a  
man who is not  
a member of the  
club.



Med. Hist  
MS.  
B  
160  
v.3

